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THE

AMERICAN AGRICULTURIST.

FOR THE

Farm, Garden, and Household.

"Agriculture is the most Healthful, the most Useful, the most Noble Employment of Man."—Washington.

ORANGE JUDD, A.M., EDITOR AND PROPRIETOR.

SMITHSONIAN INSTITUTION
WASHINGTON 25, D.C.

VOLUME NINETEEN—FOR THE YEAR 1860.

PUBLISHED BY ORANGE JUDD,
41 PARK ROW, NEW-YORK.

JOHN A. GRAY, PRINTER AND STEREOTYPER, COR. FRANKFORT AND JACOB STS., N. Y.

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AMERICAN AGRICULTURIST.

ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN.—WASHINGTON.

ORANGE JUDD, A. M., EDITOR AND PROPRIETOR.

ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE.
SINGLE NUMBERS 10 CENTS.

VOL XIX.—No. 1.] NEW-YORK, JANUARY, 1860. [NEW SERIES—No. 156.

☞**Office at 189 Water-st.,** (Near Fulton-st.)
☞**Contents, Terms, &c., on pages 28-32.**

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American Agriculturist in German.

The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of Uniform size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs.

January.

Thou hold'st the sun
A prisoner in the yet undawning east,
Shortening his journey between morn and noon,
And hurrying him impatient of his stay
Down to the rosy west ; but kingly still,
Compensating his loss with added hours
Of social converse and instructive ease,
And gathering, at short notice, in one group,
The family dispersed by daylight and its cares.
I crown thee king of intimate delights,
Fireside enjoyments, home born happiness,
And all the comforts that the lowly roof
Of undisturbed retirement, and the hours
Of long uninterrupted evening know.—COWPER.

No theme in our English poetry is more frequently, or more charmingly handled than the fireside. It is the good old English fireside—the blazing brands of the farmer's hearth that they sing. They lived before stoves were invented, or furnaces had usurped the place of fire in the farmer's home. The liveliest imagination would find it difficult to throw any poetic charms around these dark, dumb heaters. Our fathers brought over the wood fire with them, and found here abundant aliment to feed it for two centuries. Most of the generation now passing off the stage remember it, among the happy visions of their childhood—the ample fire-place, the large back-log and its rider, the andirons or fire-dogs, long enough to accommodate a small sled load of wood, the big fore stick, and the blazing, sputtering billets behind, the circle of happy faces around the hearth, the dancing shadows on the wall. All these images come back to us, pictures of delight, as we gather around the Winter fireside.

With multitudes it is only a relic of the past. The stove or furnace has closed up the fire-place, and the poetry of house-warming has gone. The fire has no longer a side to it, and we have no need to turn, first one side, and then the other to the blaze, to keep warm. The heat is made ubiquitous in every corner of the room, and the only circle formed in the Winter evening, is around the center table, where all the household gather for their social enjoyments. The open wood fire still exists, but it is only in new settlements, or obscure places, that cast iron has not yet invaded.

But all that was essential in the open fire place, is retained in its successor. The fire, though concealed, gives out its genial warmth, and becomes the rallying place for the household. What we have lost in the cheerful blaze, we have gained in lights. The tow wick candle, dim and smoky, has been succeeded by lamps of various pattern, fed by animal oils, coal oil, etc., diffusing a steady, brilliant light, turning the night into day, and making reading and domestic labor as pleasant as in the day-time.

The fireside is one of the happy accidents, that has molded the character of the Anglo Saxon race. The cheerless Winter has driven them into this retreat, and kept them under its influence for at least six months of the year. The love of home, the strong passion for land upon which to build a home, and the virtues of domestic life, which mark the race, are traceable to the fireside. The children are kept longer and more immediately under the influence of their parents, and domestic enjoyments become more a necessity and a study for both parents and children.

These bleak, cheerless days naturally turn our thoughts within, to home enjoyments and duties. There is a pleasure in the contrast between Summer and Winter, each giving increasing zest to the other. We have now cold instead of heat, a mantle of virgin white, instead of the universal green, and rest instead of activity. Following the hint of the season, how shall we make the most of this in-door life ? It should not be wasted, and become a season of mental inactivity.

A great deal depends upon the surroundings of our domestic life, the place in which the family spends these Winter evenings. We are creatures of associaton and habit, and social and mental cultivation can not go on equally well in all places. Too many farmers live in the kitchen, so that the associations of their daily toil are never, for a moment, removed from their waking hours. If man were a brute, and had no other office in life than muscular labor, this arrangement would be good enough. But he has a spiritual nature, and other aims in life than the daily industries by which he gains his bread, and it is meet that he should have time and place for the cultivation of his mind and heart.

Nothing but the stern necessities of poverty should force the farmer and his family to live in the same room where the cooking and domestic drudgery of the household are done. There should be a living room, away from the steam of ovens and the sights of pots and kettles, consecrated to rest, to social enjoyment and mental cultivation. Let it be fitted up in the most comfortable and tasteful style that the farmer's means admit of. Let it be painted and papered, and carpeted, and furnished with a mirror and bookcase, and especially let it be well warmed and lighted. It should be made so cosy and attractive, that the boys shall have no temptation to spend their evenings abroad.

The ruin of many a youth begins in the want of such a room in the farmer's home, or in the fact that it is never used. He is too parsimonious to afford fire and lights for his children, and they early form the habit of spending their evenings at the neighboring village, in the grog shop, or some place of vicious resort. Our children have social natures, and if we do not provide entertainment for them at home, they will seek it abroad. The expenses of such a living room need not be large after it is once fitted up. But were it ten times what is necessary, it would be far more economical than vicious habits in children.

Here, in this cheerful well furnished apartment, let parents and children gather for social enjoyment and cultivation. What can be more delightful than this family gathering, when the toils of the day are over ? Here is one spot consecrated to rest, where the cares of the world do not invade his peace. Here the wife and mother reigns supreme, diffusing her own neatness, cheerfulness, and joy, through the family group. Here the farmer puts off his cowhide boots and working garb, and forgets the labors of the field in the tender assiduities of the husband and the father. Here he enjoys his manhood and citizenship as he reads the news of the day, or studies the science of his calling.

It is the privilege of every farmer to make his home the center of attraction to his household, a nursery not only of the bodies of his children, but of all those graces and virtues that adorn our humanity. It becomes us to remember, as we reach another landmark in our pilgrimage, the NEW YEAR, that the farm exists for the sake of the family, that manhood and womanhood are its noblest products, the true aim of all its industries. We do not fulfill the end of our existence in making the soil better, and in stocking it with a better race of animals ; we want to make our own race better, to bring in a higher style of manhood, with a fuller social development, and a more generous mental culture upon the farm. Make the fireside what it ought to be, and we shall suffer no loss in the departure of the genial skies of Summer. We can welcome the chill breezes of Winter, its howling storms, its biting frosts, if it make our hearts warmer, our heads wiser, and fit us the better to discharge the duties of life.

◆

We double all the cares of life by pondering over them. We increase our troubles by grieving over them. A scratch becomes a wound, a slight an injury, a jest an insult, a small peril a great danger, and a slight sickness often ends in death, by the brooding fears of the invalid.

Calendar of Operations for January, 1860.

[We note down sundry kinds of work to be done during the month, not so much to afford instruction to practical men, as to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45° ; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

This table will be much fuller, and more important during the planting season when there is a greater variety of work to be done.

Explanations.—*f* indicates the *first* ; *m* the *middle* ; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signifies that the work may be done in either or in both periods indicated ; thus, work marked *fm.* indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

This is the season for the thought crop. The seed may be obtained from the past year's experience of yourself and others, and books and papers will furnish a still wider choice. New thoughts are both capital and tools. *Thinking* men *command* success. Let the home department receive due attention. Settle outstanding accounts and, as far as practicable, start square with the year. Improve the farm on paper. Lay drains and build walls with pen and ink, plant fields with pencil and ruler. Get the whole farm and its future operations *by heart*, and thus be ready for the coming campaign. Then enlarge good farming into good "neighboring." Start the farmers' club, urge forward neighborhood improvements, better roads, superior school-houses, and whatever the public need. These labors will fill the leisure of Winter pleasurably and with profit. For other operations the calendar of last month needs but few additions.

Barns and stables are, or should be in part, factories for working up Summer produce into stock for the market and manure for the farm. Make the most of the raw material. Suffer no waste. Cut coarse fodder and mix with meal, shorts, etc. Save liquid manure by using muck, sawdust or other absorbents. See subsequent articles.

Breeding Animals—Keep thriving, but do not overfeed. Good shelter is humane and profitable.

Cattle if half starved will eat almost anything, but pay for nothing. Feed *regularly*, giving roots with dry food. Give water at least three times a day. Keep them warm, provide plenty of bedding. Use the card frequently. Break steers. Handle heifers to prepare them for milking.

Cellars—Watch against frost. Cover exposed bins of roots or apples with straw. Shut the cat in at night—rats will be frightened away if not caught.

Corn—Shell for market. First, select the best for seed, if neglected until now. Grind and cook that fed to swine.

Farmers' Clubs should be established in every school district. Invite your neighbors to join. Two heads are better than one, and all the heads in a neighborhood set to thinking, will bring out much of value.

Fencing Stuff—Cut and prepare while the weather favors. Make gates, and hole, or pin posts under cover, stormy days.

Grain—Secure from dampness ; expel rats and mice.

Hemlock and Oak Bark—Market early that prepared for the tannery.

Hemp and Flax—Break and prepare for market.

Hogs—Keep them in comfortable pens. Supply with leaves, straw, dry muck, sawdust, etc., for bedding and manure. Clean out the pens often. Give cooked food, and an occasional treat of barn sweepings, cut hay, etc., for a change. Turn in the male for Spring pigs, ff, if not already done.

Horses—Treat them as they deserve, with warm, light stables, plenty of bedding, and a liberal allowance of grain. Give carrots frequently. Keep well shod and sharpened, and blanketed when standing out. Handle and halter-break colts.

Ice Houses—Build above ground convenient to the dwelling, if not provided. Secure a full supply of ice. Provide for drainage and ventilation.

Implements—Repair broken and look for new. Examine advertisements and catalogues of dealers. Keep wood-work painted, and coat iron with tallow and resin to protect from rust. Oil running gear of horse powers, fanning mills, etc.

Lumber—Cut surplus forest growth for boards, posts, ties, cabinet work, etc., if it can not be done in September, which is preferable. Take out old trees and give the young growth a chance.

Manure—Make it from every source ; stable, pen, privy, muck-bed, and kitchen-drain. In each of these are the elements of grain, grass, fat cattle and swine, full pockets, and prosperity.

Marketing produce is conveniently done at this season. Keep an eye on market reports. Sell when a paying price is offered. Be careful to have a full understanding in making contracts, and do a cash business as far as practicable.

Plowing when the ground admits, benefits heavy soils ; the frost will crumble them. Insects and noxious weeds will also be destroyed.

Poultry will pay in marketable currency for warm quarters, and good care. Feed with cooked grain, potatoes, and refuse meat, until they sing. Allow free access to water. Provide them with gravel, also pounded oyster shells or lime, and ashes to wallow in.

Roads—Allow none to remain obstructed by snow drifts. Keep sluice ways and bridges in order.

Salt all stock at least once a week. A little on cut feed will give a relish, benefiting cattle and saving fodder.

Sheep—Turn the buck with the ewes. ff. See article on page 12. Keep separate from other stock, allowing warm sheds for shelter. Give a few roots daily, and an allowance of grain to breeding ewes.

Wood should be secured, cut, and seasoned under shelter. Cut decaying and fallen trees. Provide a year's supply in advance.

Orchard and Nursery.

Trees are now taking their Winter rest, and need but little attention except to preserve them from injury by cattle browsing the tender shoots, or rubbing and barking the trunks. In Southern latitudes, grounds may be prepared and trees planted out. Where immediate effect is desired, large trees may be removed in Winter by digging them up with a large mass of frozen earth attached, and resetting in holes previously prepared : but a good, permanent growth can not thus be secured. In a short time such trees lose vitality. It is better to transplant younger trees and wait a few years.

Keep all standing water from the grounds by surface drains now, and by thorough underdraining as soon as the season will allow.

Pruning at this season is not advisable. The wounds are liable to crack from hard frosts. In mild latitudes it may answer, but late Summer is better.

Examine trunks and branches for caterpillar and other eggs, and clear off rough bark and scale. Protect against rabbits by tying thick tarred paper around the trunk. Heap up a mound of snow and trample it firm about the tree to keep off mice, especially near walls and hedges.

Cions may be cut at any time when free from frost, and buried in sand in the cellar for Spring use.

Provide a full supply of implements, stakes, labels, tallies, etc., for another season.

Kitchen and Fruit Garden.

The work in this department will be mostly on paper this month, where new beds may be laid out and other improvements marked. Catalogues and other sources may be consulted for new varieties of seeds. In latitudes permitting it, ground may receive preparation for early vegetables.

Bean, Hop, and Grape vine poles, pea brush, etc., may now be secured while cutting the supply of fuel.

Cold Frames—Ventilate when weather permits, and protect from severe cold with extra covering. A snow blanket will do them no harm.

Cuttings of currants and gooseberries may still be made and the bushes pruned.

Hot-Bed Frames and Sashes—Prepare all for early use. Extra early vegetables may be sown in them, ll, but February is better for ordinary purposes.

Mushrooms—[illegible] and keep from frost, and moderately moist, in the cellar or green-house.

Raspberries—[illegible] those covered last month, and replace the earth if washed away.

Rhubarb for early use will be much forwarded by covering with an open half barrel, filled with manure.

Seeds—Test before buying a full supply. Examine those stored, and guard against mice.

Trench or plow where needed to lighten clayey spots, when weather permits.

Flower Garden and Lawn.

Protect evergreens and other shrubbery from being broken by snow, or ice. A slight jarring after a storm will usually be sufficient. With the juniper and yew it is a good precaution to pass strong twine around spirally to keep them compact.

In Southern States, and wherever the ground can be worked, walks may be graded and hardy shrubs and deciduous trees planted. New walks and other improvements may be planned for.

Prepare labels and stakes for Spring use, tying them in neat packages to facilitate the operations of a busy season. Examine the flower pits and frames, and admit air every mild day, but keep closely covered during heavy frosts. If covered with snow, leave it on for a Winter protection.

At the South where there is little frost, trees and shrubs may be planted, layers and cuttings put in, grounds laid out and dug, or trenched, and hardy annuals and perennials sown.

Green-Houses.

The object of this department being preservation rather than growth, care will be necessary in regulating the temperature. If made too warm, the plants will be forced too rapidly, and as colder weather alternates with mild, will be subject to injury, without great pains. The heat may range from 35° to 45°. It should be sufficient to dry the air.

This apartment should be kept scrupulously neat. Remove decayed leaves, stalks, etc., from the pots, and stir the earth in them frequently. Sweep and dust the floors, and syringe the plants occasionally.

Air should be admitted through the upper ventilators, but not in foggy or damp weather. When very cold the houses must be kept closed and covered with shutters or mats, removing them and ventilating on mild clear days.

As the plants tend to grow toward the light, the pots should be turned occasionally.

Bulbs—Water moderately, except for a rapid growth, and remove to the parlor or forcing house those wanted for blooming.

Insects—Check with tobacco smoke and soap-suds.

Oranges, Lemons, Oleanders and Myrtles beginning to grow, will need moderate waterings, and more light. Examine the trunks for scale or other insects.

Water moderately most of the plants in this collection. They require very little while in a state of rest. As they push into growth increase the quantity and give more frequently. Tepid water may be used to advantage, and it is better to apply it during the middle of the day.

Hot-Houses and Conservatories.

Sudden changes are most severely felt by rapidly growing plants, and great watchfulness will now be required to maintain steady heat. From 70° to 80° is most favorable, varying according to the nature of the plants, and the rapidity of forcing. Too high temperature at night is injurious, as plants are naturally accustomed to a decline of a few degrees during darkness.

Air is in good part the life of plants, and should be frequently renewed for their use. Admit it through the upper ventilators to avoid a cool draft, during the middle of the day and in clear weather.

Azalias—Syringe and water more freely as they increase in growth and begin to bloom.

Bulbs—Bring from the green-house as wanted for succession of bloom. Change the water of those in glasses at least weekly.

Calceolarias—Repot those needing it, and turn frequently to secure upright growth.

Camellias should now show a fine bloom. Water once or twice a week and syringe the foliage. Avoid wetting the flowers as this will hasten their decay.

Carnations—Stake those in bloom, and water often. Shift those which are pot-bound. Put in cuttings for a Summer stock to bloom in the open grounds.

Cinerarias will need especial watching as they are favorites of the green fly. Tobacco fumes are the best antidote. Repotting will be necessary in many instances.

Cuttings and Layers of many growing plants may now be made to advantage, especially of those kinds intended for bedding out in the Spring.

Fuchsias—Select young vigorous plants, and prune to a good head. Those decayed and unsightly, may be worked up for cuttings. Repot growing plants.

Grapes, in the early houses are beginning to color, or even ripening off. They require a dryer atmosphere with very little water at the root. Air freely. Later houses require more care. Some need pruning thinning, syringing, and an application of sulphur to destroy the mildew according to the amount of forcing they have received.

Insects—Prevention is better than cure. A moist atmosphere, frequent washing and syringing of the foliage, hand picking, etc., are the best preventives. For a cure, use tobacco fumes for thrips and green-fly, soap and water for scale, and a sponge or syringe and clear water for red spider.

Peach Trees, Nectarines, Figs, etc., in pots, should now be placed in a warm part of the house, repotting if necessary. With proper care, watering occasionally with liquid manure, they will fruit during the latter part of June.

Petunias, Verbenas, Pelargoniums, etc.—Plant cuttings and layer for an increase of stock. A large number will be wanted for massing in the Spring.

Pines—These begin to show fruit. A high temperature is needed, say, 80° to 85°. Water each week.

Potting—Many plants need an early shift to pots of a larger size, and cuttings inserted last month are now ready to pot off. Have a heap of potting soil at all times in readiness where it will not freeze.

Seeds of many out-door annuals may now be sown for early planting in the borders as soon as made up in the Spring.

Shutters—Have in readiness and use during snow storms and when very cold or windy. It is not best to leave them off at night unless the weather is quite mild.

Water—Examine the pots and apply water when the soil becomes partially dry. Syringe frequently, but avoid excess. More water will always be needed as rapidity of growth increases. The water should always be soft, and taken from a tank or cistern in the house itself.

Apiary in January.

Plenty of air is as necessary for bees in Winter as in Summer. Without care the passages may be closed by rain freezing on the outside, or moisture condensing from the inside, and the bees be smothered. Dead bees and filth falling from the combs sometimes obstruct the entrance. Turn back the hive occasionally, and clear away all litter and frost. It is not necessary to dig out hives that may be covered by drifting snow....During mild weather, unless there be new fallen snow on the ground, it is well to allow the bees to fly; but on days only warm enough to tempt a few to issue, shade the hive to discourage them. In very cold weather the heat of the sun is needed upon them....Continue to guard against depredations from rats and mice, especially with those stored in the house. These latter, should be kept dark and as quiet as possible. The offensive effluvia from dead bees may be removed by sprinkling air-slaked lime upon the floor of the room.

Descriptive Notes upon the Seeds Distributed to our Subscribers.

Explanation.—For list of Seeds, see page 26. The following notes are designed not only to describe the seeds, but also to indicate the mode of culture. This list should be preserved. Other fuller articles on various plants will appear from time to time, and also hints as to the time of planting, etc., in the monthly Calendar of Operations. The missing numbers in our seed list are those of seeds dropped, in some instances because supposed to be sufficiently disseminated, and in others because having been generally tried, they have not proved worthy of further introduction. A portion of the seeds offered this year, are quite common in some parts of the country, but we offer them for the benefit of those who have not yet had them, and especially for numerous subscribers who live in the Western States and Territories remote from convenient access to seeds of any kind. Our packages are necessarily small; in some cases they are put up with reference to the little weight that can go under postage stamps, and in others, because of the great cost of choice seeds. Very many of our flower seeds for example, cost us four, five, and six dollars the pound, and several of them much more than this, even when bought at the lowest wholesale prices in Europe, and imported by us duty free. Most of these seeds are annuals, and the product of the first year will furnish an abundant yield of seed for the future. Generally, the small packages of flower seeds will supply all the plants required in an ordinary flower bed or garden, if sown and cultivated with moderate care.

Field Seeds.

No. 2. IMPROVED KING PHILIP CORN.—Described particularly last month. A heavy brown corn, maturing early; larger than the older King Philip, but not quite so early. Specially adapted to short seasons, or late planting.

No. 3 STOWELL'S SWEET CORN.—A large growing variety, long in maturing, and hence called "Evergreen." Difficult to obtain ripened or pure seeds; much of it being nipped by frost; and a large portion of that in the country being impure, from hybridization. Valuable for size both of ear and stalk, and from the length of time it may be gathered for cooking.

No. 6. ASHCROFT'S SWEDISH TURNIP.

No. 7. RIVER'S SWEDISH STUBBLE TURNIP.

No. 70. WAITE'S LONDON Purple-top SWEDISH TURNIP.

These are improved varieties of the ruta-baga, yielding well and of good quality; and maturing early, and hence may be sown late, say in June or even in July.

No. 94. CRYSTAL FLINT, or HOMINY CORN.—Described in an article last month. A beautiful, large growing, productive corn. Kernel white, or almost transparent flint, beautiful for meal or hominy. Requires the ordinary corn season, and plenty of room.

No. 98. LONG RED MANGEL WURZEL.—A good beet for feeding and fair only, for cooking. Requires early planting, and the same culture as ordinary beets, but needs more room, as they grow to a large size.

No. 101. IMPROVED LONG ORANGE CARROT.—This is an improved variety of the well known Orange Carrot, cultivated by the Society of Friends at Pawtucket, R. I., it requires the usual culture of common carrots.

Vegetable or Garden Seeds.

No 8. DANIEL O'ROURKE PEA.—See page 18.

No. 9. CHAMPION OF ENGLAND PEA.—See page 18.

No. 11. KOHL RABI—"A turnip out of ground;" resembles a round turnip growing on a short cabbage stalk, with a dozen or so of long-stemmed cabbage leaves growing from different parts of the bulb. Cooked when green, the same as turnips, it is tender, sweet and better than a turnip or cabbage. If left to mature it becomes hard and tough. Cultivated the same as cabbages. It matures earlier, however, and when not for early use may be sown in the open ground in May. Sow at several intervals for successive use during the Summer. We have never known it to fail of growing good heads or bulbs, and recommend its general culture. Cook when the bulbs are not larger than tea cups if you would have it in its best state. Those who have left it to harden before cooking, do not know its value.

No. 13. ENFIELD MARKET CABBAGE.—A small quick growing very fine early cabbage. With us no early cabbage has equaled this. It was first introduced from England by us three years since.

No. 15. MAMMOTH CABBAGE LETTUCE.—Its character is sufficiently indicated by its name. One of the best varieties we have known.

No. 17. RED STRAP LEAF TURNIP.—The most rapid growing turnip we have, and of very fair quality. Matures early for Spring and Summer use; and may be planted later than any other, and yet mature.

No. 21. WINTER CHERRY (*Physalis viscosa*).—Sow in open ground at any time, the earlier the better, though the seeds may not come until May or June. For early use a few of the seeds may be started like cabbage seed, in a green-house, or hot-bed, or in boxes, or bits of turf It bears transplanting well. The fruit matures early, and when lemon is added to give it a little tartness, is excellent for sauce, and pies. Is a substitute for fruit in newer countries. The green fruit makes good pickles. The ripened fruit keeps all Winter—hence its name. Fruit about the size of cherries; drops off when ripe. Plants grow spreading, and two to four feet high; requires 2 to 3 feet square for each plant. We have plenty of seed of our own raising.—*Physalis alkekengi* is another variety bearing a larger and more acid fruit, and would be far preferable, but it does not mature in this latitude, unless started early in the green-house, and not always then. Of this variety we have a litte seed for Southern subscribers specially desiring it.

No. 55. WHITE GLOBE ONION.—A new variety introduced by us two years since. Large, white, globular, good flavored. We had many good reports from it during the past year.

No. 57. EUGENIE PEA.—See article on page 18.

No. 58. NAPOLEON PEA.—See page 18.

No. 63. LONDON PARTICULAR LONG SCARLET RADISH.

No. 64 EXTRA RED ROUND TURNIP RADISH.

Both of these were introduced by us two years ago and they have given very good satisfaction. They were the best of several kinds tried last season. Sow early in Spring, and at intervals for a succession. They mature quickly.

No. 71. LONG WHITE FRENCH TURNIP.—A large, white, sweet turnip, good for garden culture for table use, or for field culture for feeding. We know of no turnip equal to it for the table, and for long keeping. In two or three localities it did not do well the past season, owing to the weather, or soil, or manure, but the general reports are decidedly in its favor. May be sown for table use at any time up to June; and for a general crop and Winter keeping from the middle of June to middle of July or later.

No. 72. BRUSSELS SPROUTS (Imported).—This belongs to the cabbage tribe, and is cultivated similarly. It bears on each stalk a number of little cabbage-heads, hardly the size of a hen's egg. These are cooked like cabbage, and are considered a delicate, excellent vegetable.

No. 74. SOLID WHITE CELERY —This is the best variety cultivated here. For Summer use sow in the hot-bed in Winter; and in the open ground in Spring, for Fall and Winter use. A special chapter on its culture will be needed by the inexperienced.

No. 76 SKILLMAN'S NUTTED MUSKMELON.

No. 77. MOUNTAIN SWEET WATERMELON.

These are the most popular varieties for family use. We have tried others the past year, but found none excelling them. The seed is now pretty well diffused, and is only offered to meet the wants of those unable to get it of dealers. Plant when danger of frost is passed, or before by using boxes of earth, or sods, as will be referred to in due time.

95. HUBBARD SQUASH.—This was illustrated and described in last volume, page 83. It is a good squash for Winter and Spring use, and may be cooked also as a late Summer squash. We did not succeed in getting a very good yield, or large specimens, but several neighbors had good success and like it very well. We shall plant again, and offer the seed to those desiring it.

No. 99. PRINCE ALBERT PEA.—We have not tried this, but several subscribers who have done so recommend it very highly, and we place it in our general list. Grows 2½ to 4 feet high, according to soil, and matures very early.

No. 100, EARLY CAPE BROCCOLI.—A variety of cabbage somewhat resembling cauliflower, though less delicate. Sow early in May, on rich ground in the open garden. Cover lightly, and water a few times if dry, until the plants appear. Transplant in July in rows two feet apart, twenty inches in the row, and cultivate like cabbage. Cut the heads before they open.

No. 102.—MAMMOTH LEGHORN SQUASH —This was described at length in Vol. 18, p. 327. It was recently introduced from Leghorn, Italy. is very large and of fine quality for the table. We saw a number of specimens growing last Summer which weighed from 75 lbs. to 100 lbs each. This was of course on good soil. We secured all the seed from 4,500 lbs. of the squashes, but although large in size they contain but a small number of seeds. We have scarcely ten pounds in all. As there are many applicants it will not be possible to send more than 3 or 4 seeds to each and probably very many asking for them can not be supplied at all this season.

No. 103. SAGE is too well known to require description. The seed is distributed for supplying subscribers in newly settled districts where even common seeds are sometimes obtained with difficulty.

No. 104. THYME.—A common aromatic herb sent like Nos. 103 and 105, for convenience of remote subscribers.

No. 105. CHILI RED PEPPER.—For seasoning, pickles, etc. Sow thinly, half an inch deep in a pan in the house, or a hot-bed in March or April, and transplant in May or June, a foot a part, in rows eighteen inches distant. Transplant when three or four inches high, hoe frequently, and earth up the stems.

No. 106. SWEET MARJORAM.—A popular pot-herb, sow early in April, cover very lightly in rows ten inches apart, and when up, thin to too inches in the row. Cut the plants when first blooming and dry them in the shade.

No. 107. GIANT ASPARAGUS.—This has been brought to superior size by continued good culture. Sow early in Spring, in drills one and-a-half inches deep, and eighteen inches apart, on well manured ground. Keep free from weeds during the Summer. In October cover the bed with litter to protect the roots from frost. The roots may be transplanted when one year old, into beds prepared by deep trenching and heavy manuring. Further directions for its culture given from time to time.

No. 108.—MAMMOTH PUMPKIN.—We have not cultivated this variety, but obtained the seed from a reliable source, where it was pronounced superior.

No. 109.—MAMMOTH RED TOMATO.—Recommended to us as of large size if well grown, and of excellent quality.

Flower, Fruit, and Ornamental Seeds.

No. 23—MIGNONETTE (*Reseda odorata*). A fragrant annual, with moderate claims to beauty of flower, but a favorite for its perfume. Of easy culture; grows on almost any soil; blooms profusely until killed by frost; sow May 1st, to June 15th.

No. 25—NASTURTIUMS (*Tropæolum majus*) A semi creeping annual, often trained on a trellis or allowed to run over rocks or walls. Bears a profusion of flowers. The mixed seed we distribute giving yellow and crimson colors; is doubly valuable, as it yields beautiful flowers, and its seed capsules picked green make an excellent spicy pickle.

No. 27—COCKSCOMB (*Celosia cristata*). A pretty well known plant, named from its corymb or head which in some varieties resembles a cock's comb. This is made up of an infinite number of minute scarlet flowers. We have seed of a variety which produces a cone-shaped head, of a splendid deep crimson color. (The seed cost us $24 per lb.) It is often grown in pots, but florishes well in the open ground; continues long in bloom; sow in Spring; grows 2 to 3½ feet high.

No. 29—DOUBLE BALSAMS (*Impatiens balsamina*). Called also "Garden Ladies' Slipper", in distinction from the wild Ladies' Slipper. They are sometimes called "Touch-me-not", as the seed capsules, or pods suddenly burst when touched. We send out several varieties of seeds mixed, to give a diversity of color in the flowers, which range from pure white, lilac, pink, rose, and a blending of these colors. The double flowers are very pretty, but it is difficult to preserve them double, as they are prone to return to their natural single state. The balsams are annuals; grow 1½ to 2 feet high; branching when not too thickly planted; easily grown on every variety of soil; usually sow themselves, but seed of double flowers should be cultivated for propagation.

No. 30—**TASSEL FLOWER** (*Cacalia coccinea*). This is most appropriately named, as the flower is a perfect "tassel" with scarlet fringe. We have admired it as much as any flower grown in our garden. It has been called "Venus' Paint Brush". Sow in the Spring; it usually blooms from July until killed by frost; hight, 1 to 1½ feet.

No. 31—**CHINESE PINK** (*Dianthus Chinensis*). Dianthus signifies "Flower of God", and embraces the Sweet William, Carnation and garden or common Pink. They are mostly perennial, or biennial like the Chinese variety. This is a pretty flower, though without the fragrance of several of the species. Though biennial it blooms somewhat the first year. The flowers range from the richly colored crimson, with edgings of pink, lilac, and other shades, to pure white with a center of dark red, nearly approaching a black color; even in the largest collections it is almost impossible to find two flowers alike. They continue to bloom for several months in succession. Sow in Spring.

No. 32—**SPLENDID PORTULACA, MIXED** (*Portulaca splendens, lutea, alba, elegans, etc.*) A bed of either of the above, or of the whole combined makes a fine show. We send out mixed seeds. The portulaca is a trailing plant of only a few inches in hight. On rich soil a single plant will cover a circle of one foot in diameter. They are usually grown too thickly. Colors white, red, yellow, scarlet and crimson, sometimes blended in the same flower. They are very hardy annuals blooming the entire season and leaving ample seed in the ground for a crop the next year. Sow in Spring, or even in Autumn.

No. 33—**CYPRESS VINE** (*Quamoclit vulgaris*). This is the finest hardy annual climber of the flower garden. There are two colors, white and scarlet, the latter being much the prettier. Sow when the ground is warm and dry, previously soaking the Seed for twenty-four hours, or it will vegetate shyly. See description and illustration of a cheep, pretty Cypress Vine *trellis* on page 339, Vol. XVII.

Nos. 34 and 35—**CHINESE AND GERMAN ASTERS** (*Aster Chinensis*), are so near alike that one description will suffice for both. Skillful German florists have simply improved the Chinese varieties. Some of them are very double or fully quilled, and rank among the prettiest flowers of the garden. Sown in the early Spring, they come into bloom in August and September, and continue until severe frost. They are among the latest flowers of the garden. Color white, red, yellow, and intervening shades.

No. 38—**SWEET WILLIAM** (*Dianthus barbatus*). belongs to the same family as Chinese Pink. It is one of the choicest perennials blooming the second year from seed, and so on through a long series of years. The great variety of colors, often combined in the same cluster, the delightful fragrance and richness of its bloom render the Sweet William a universal favorite which no garden should fail to have.

No. 40—**ESCHOLTZIA** (*Californica*) or California Poppy. A hardy and very showy annual from California and Oregon. It is trailing in habit, seldom growing more than a foot in hight. The flowers are bright yellow, and continue in bloom for a long time. A bed of them in full bloom almost dazzles the eye with their brillancy. (See illustration and description in Vol XVII., p. 339.)

No. 42—**FOXGLOVE**, (*Digitalis alba, purpurea, lanata, etc*). A perennial of marked beauty. Some of the species are little more than biennials, dying out every few years. It grows from two to four feet in hight, and produces tubular flowers along its spire-like spike. Many of the flowers are finely mottled in appearance, and vary in color from pure white to lilac, pink. red and yellow. It is in bloom most of the season, and may be propagated from seed or divisions of the root. It yields the medicine *digitalis*. The seed we send out will be a mixture, of the finest varieties.

No. 47—**MORNING GLORY** (*Convolvulus major and minor*). An annual climber too well known to require much description. They florish in almost any position, and when allowed full freedom, extend along a fence or up a trellis eight to ten or more feet. They open very early in the morning—whence the name—and close when the hot sun comes out. They are white, blue, purple, and various intermediate tints. Sow at any time in Spring and Fall. Where once raised there is little danger of losing the seed. We send out two varieties of seed mixed, the *C. major* and the *C. minor*. The *minor* grows more dwarfish and branching, spreading out over a bed. It bears blue and yellow flowers, which continue in bloom later in the day than the major.

No. 49.—**CANDY-TUFT** (*Iberis umbellata, amara, etc.*) A good plant for sowing in masses. It is dwarfish, with flowers of various shades from pure white to purple. It may be sown in Spring or Autumn. It seeds itself in Autumn, and blooms the next season, six inches to one foot from the ground, in small clusters

No. 50.—**SCHIZANTHUS** (*humilis, pinnatus, etc.*). A pretty class of plants, blooming from August to October. The colors vary through several shades in which yellow and purple predominate. They grow about two feet high, and are annuals well suited to garden or pot culture. Sow in Spring.

No. 51—**DRUMMOND'S PHLOX** (*Phlox Drummondii*). This is one of the Phlox family, worthy a place in every collection of flowers. It is very hardy and finely adapted for massing. Flowers of white, pink, scarlet, crimson, and purple with the intermediate tints. A showy spreading plant of near one foot high. Sow in Spring.

No. 78—**AGERATUM MEXICANUM**, or blue-flowered Ageratum. A rather tender annual of Mexican origin, but flourishes well on a warm border, when sown about the middle of May. Some varieties are of a very pale blue, nearly approaching to white. They may be taken up before frosts, and transferred to the house in pots, where they form fine Winter blooming plants.

No. 80—**YELLOW HAWKWEED** (*Hieracium mutabilis*). This was introduced into our garden last season for the first time, and gave much satisfaction. A description hereafter.

No. 81—**CANARY BIRD FLOWER** (*Tropæolum peregrinum.*) This is an annual of the same family as the Nasturtium: a fine climber, with pretty little canary colored blossoms. which, when opening, have a fancied resemblance to a bird. Sow on light soil about the middle of May. It requires a trellis to run upon. (Seed scarce and very costly—may soon run out. Those sending for this should name a substitute to be sent in case we have no more seed.)

No. 82—**THUNBERGIA** (*alata, alba, aurantiaca, etc.*) This fine climber was illustrated on Page 339 of Volume XVII.

No. 83—**SNAP DRAGON** (*Antirrhinum majus*).—A curious flower, which when pressed, somewhat resembles an animals mouth. Sow in Spring.

No. 84—**AFRICAN MARIGOLD** (*Tagetes erecta*). A showy annual, with flowers of large size, and rich colors of orange, yellow, and purple. Sow any time in May, and they will flower in profusion from July until frost.

No. 85—**GAILLARDIA** (*picta* and *bicolor*). Often called "Painted Gaillardia." It is usually classed as a perennial, but, when sown early, say May first, on a warm soil, flowers the first season. It will not bear the Winter without some protection. Flowers large, crimson and yellow, borne on stalks one to two feet in hight, and of a showy appearance.

No 86.—**MIXED EUPHORBIA** (*Euphorbia variegata*) An elegant flower from Missouri, blooming late in the season. Sow the latter part of April or early in May, on a warm soil. It is an annual. Some of the species are tender Green-house plants.

No. 87.—**GOLDEN COREOPSIS** (*Coreopsis tinctoria, atropurpurea, etc*) A well known hardy annual with genuine claims to beauty. The *tinctoria* is the most common, with its bright yellow flowers having a dark center. It blooms profusely in June and July, and stands one and a half to three feet in hight.

No. 89—**COTTON PLANT** (*Gossypium herbaceum, arboreum, barbadense, etc.*) The common varieties of the South are *arboreum* or Sea Island, known as "Long staple;" *herbaceum* or "Short staple," called in commerce Upland cotton; and *barbadense*, or Mexican. The seeds we send out are Sea Island (*arboreum*), and Upland (*herbaceum*), mixed. The Seed of the Upland variety is covered with down; the Sea Island is smooth and glossy. They are easely separated and we therefore mix the two. This plant flowers in warm locations at the north, and is quite ornamental. Sow as soon as frosts are over and ground warm.

No. 90—**NORWAY SPRUCE** (*Abies excelsa*). Seeds of this and the following variety are only kept by a few extensive seedsmen; consequently they are difficult for people in the country to obtain. Every one admires this stately and very pretty evergreen tree growing from one hundred to one hundred and fifty feet in hight. Sow the first of May, on moist but well drained sandy loam, or still better in boxes, covering slightly and partially shading. Water occasionally, but if too wet they will damp off. There is little danger after two years old, when they may be transplanted to the garden or nursery. It is much better to get the young trees wherever they are accessible at the nurseries, as they usually are, and quite cheaply.

No. 91.—**ARBOR VITÆ** *American* (*Thuja occidentalis*). This is too well known to need much description; forms a beautiful evergreen shrub or small tree, whether planted singly or in rows for a hedge. It is sometimes found 50 feet in hight. Treat as the Norway Spruce, save that it may be sown in the Fall as well as Spring. Boxes of light loam with an admixture of sand and muck furnish the best soil. It it better, to get this at the nurseries, as noted under No. 90.

No. 110. **NEW ROCHELLE BLACKBERRY.**—Full directions for cultivation were given in last Volume (Pages 147, 276, 339). They will grow true to kind with few exceptions, and superior varieties may, perhaps, chance to be produced from seed. Sow early in Spring, keep free from weeds, and transplant to rows 8 feet apart the following year.

No. 111 **CASTOR OIL PLANT.**—See page 19.

No. 112. **BROAD LEAVED LAUREL**—A low growing Evergreen, somewhat resembling the Rhododendron. It has beautiful showy blossoms, and bright, broad leaves. Should be sown in rather light soil, mixed with leaf mold. Will be more fully described hereafter.

No. 113. **DOUBLE SUNFLOWER** (*Helianthus annuus*).—This variety has its entire disk covered with the ligulate petals like these in the ray of the common sort. Grows much like the ordinary sunflower, say seven to ten feet in hight, with large spreading leaves. Is an annual, to be planted in early Spring, or it is sure to come up voluntarily where any seed dropped the previous season. Succeeds on any fair soil, and needs thinning to single stalks 2 feet apart to develop fully.

No. 114 **MIXED PETUNIAS** (*Petunia in var,*).—These are showy annuals, or even perennials in warm climates and are made partially so in northern green-houses. Plants of semi-creeping habits, flowering profusely from early Summer, until cut down by frost. Flowers tubular, of various hues, from pure white to lilac and purple. Sow in early Spring in open ground, or in a hot-bed if practicable, to forward the period of bloom. Thin to one foot apart, or even more on rich soil. Choice varieties may be taken up and potted on the approach of frosts and will bloom through the Winter, in the parlor.

No. 115. **DOUBLE HOLLYHOCK** (*Althæa rosea*)—A showy perennial of easy culture, perfectly hardy, and desirable in every collection. It grows 6 to 8 feet high and flowers successively upon a tall spike continuing in bloom for a long time. Sow on a common garden soil, the last of April, or early in May, and thin to 18 inches apart. It will not bloom until the second season, and sometimes dies after flowering a few times, unless the roots are divided.

No. 116. **MOURNING BRIDE, OR SWEET SCABIEUS** (*Scabiosa atropurpurea*).—A perfectly hardy and showy annual, of two feet in hight, flowering from July until cut down by frost. The flowers are of different colors, ranging from lilac to purple, and nearly black. Sow early in May, and thin out to 8 or 10 inches.

No. 117. **DOUBLE WALLFLOWER** (*Cheiranthus cheiri*)—So called from *cheir*, the hand, and *anthos*, flower, the blossoms resembling the fingers; varies from yellow to violet in color. A perennial requiring some protection in Winter.

No. 118. **BEE LARKSPUR** (*Delphinium elatum*).—A showy and hardy perennial from Siberia. Its blue flowers are borne on spikes from 4 to 6 feet high. Sow in May and subsequently thin to three feet apart, as each root throws up many stalks. It does not bloom the first season.

No. 119 **MIXED CHRYSANTHEMUMS** (*Chrysanthemum coronaria*).—These were figured and described on pages 52 and 340 of last volume. Hardy perennials, usually propagated from cuttings or divisions of the roots, but grow readily from seed and flower the second season They are too well known to need further description, blooming as they do so profusely from September, until killed by the hard Winter freezings. New seedlings of value may be expected from the seed.

No 120. **CLEMATIS** *Virginicum*, called also Virgin's Bower.—A native perennial climber of strong habit, attaching itself by its petioles, and growing 15 to 20 feet in hight. Flowers white, of only medium beauty—its fruit, or seed vessels being the most attractive. It forms an ornamental covering for an arbor, or lattice work. Sow in early Spring. Most of its foliage is killed by Winter. but springs up anew from the root.

No. 121. **TRUMPET FLOWER** (*Bignonia radicans*).—One of the best climbers, with gay bell-shaped flowers of yellowish scarlet color, blooming in clusters from July to October. It is a woody perennial, and does best when laid down and slightly covered in Winter. Propagated either from seeds or cuttings.

No 122. **MIXED CANTERBURY BELLS** (*Campanula medium*).—Fine biennials with showy bell-shaped flowers, of white, lilac, blue, and intermediate colors, flowering the second season from seed, on spikes 2 to 3 feet high. Sow in early Spring and transplant or thin out in the Fall, to one foot apart. They will sometimes live 3 or 4 years.

No. 123 **GILIA** (*Nivalis*).—A delicate snow white an nual of one foot in hight. Its finely divided leaves give it an attractive appearance. Sow early in May.

No. 124. **Whitlavia** (*Grandiflora*).—One of the very best annuals, recently introduced from California. It flowered with us July 1st (just 5 weeks from sowing) and continued in bloom until the middle of September. It grows about one foot high and may be thinned to 6 inches apart. Flowers blue and bell-shaped, like the *Campanula.*

No. 125. **Standing Cypress** (*Ipomopsis elegans*), sometimes classed with the *Gilia* family. A very pretty biennial, not perfectly hardy, with finely divided leaves, somewhat resembling the climbing cypress. Flowers tubular, of scarlet, and variegated colors, borne on a spike 2 to 3 feet and even more, in hight. Continues in bloom several months. Sow in Spring, and slightly protect during the Winter.

No. 126. **Long-tubed Centranthus** (*Centranthus macrosiphon*).—A delicate but hardy annual, little cultivated in this country, but quite desirable. Grows 10 to 12 inches ; high its fascicled flowers, borne in close clusters resembling the Sweet William, and continuing their freshness until killed by frosts. Sow in early Spring and thin to 6 inches distant.

Advertising Information—Gratis....VII.

(*Continued from page* 355—Vol. XVIII.)

We have investigated several advertisements since our last issue, and have received a large number of circulars, etc., from subscribers to whom they have been sent. Among these are lottery schemes by the score ; vile sheets called Medical Journals ; complaints of loss of money sent to "Dr. Brown" of Jersey City ; offers of "Microscopes for 25c.", consisting of a piece of sheet lead, painted black, and having a bit of glass in a hole in the center, got up at a cost of perhaps a penny a piece, and not worth a farthing ; positive assurances of teaching how to turn baser metals into gold, all for a dollar ; bogus offers of agencies for sewing machines ; bogus gift enterprises, etc., etc. Some of these will be described more fully hereafter, together with new things coming up. We have now only room for

[No. 26.]

"**Fifty Methods of Making Money.**—A competence secured for $1.00 !" Such is the heading of a sheet referred to in our last, which we obtained by sending $1 through a friend. This sheet contains some fifty so-called recipes, and by referring to sundry letters we find that in reality we have here in one lot almost all the wonderful, or wonderfully puffed recipes, that have been advertised over the country at various prices from 25 cents to $5 each. One of them has been advertised by some party, and then some other party has got hold of it, and he has advertised the same thing under another name at another place. Few of these recipes are valuable, and such as are, are found in chemical or other scientific books. Our readers will therefore understand that they probably have here about all the wonderful money-making recipes and schemes that they have seen or will see advertised in newspapers or private circulars—no matter what name or description may be applied.

A preliminary note says that "in commencing the manufacture of any of the recipes embraced in these instructions it will be necessary to employ agents to travel and sell. By so doing, from $5 to $10 per day and upward can be realized, etc." Yes, if your agents can find greenhorns enough to buy. Well here are the wonderful recipes, the "fifty ways to make money." [We print them, not on account of value, but to give our readers the whole gist of what is offered by the scores of advertisers.]

No. 1. **To Make Fire-Proof Paint.**—Take a sufficient quantity of water for use ; add as much potash as can be dissolved therein. When the water will dissolve no more potash, stir into the solution first, a quantity of flour paste, of the consistency of painter's size ; second, a sufficiency of pure clay to render it of the consistency of cream. Apply with a painter's brush. The above will admit of any coloring you please.

[*Remark.*—A bad beginning ; what will keep the paint from washing off, even if it were fire-proof, as it would be if *enough* clay were added.—Ed.]

2. **Premium Black Writing Ink.**—Take 2 oz. extract logwood ; 1 gal. soft water ; boil slightly, or simmer in an iron vessel 15 minutes ; dissolve in a little hot water 24 grains Bichromate of Potash ; 12 grains Prussiate of Potash ; and stir into the liquid a few minutes while over the fire ; take off, and when settled, strain it twice through common muslin or sheeting cloth. The above Ink is a jet black from the first, flows beautifully from the pen, and is so indelible that even Oxalic Acid will not remove it from paper, and costs, when made in large quantities, only four cents per gallon.

[*Remark.*—This recipe has been sold by advertisers, thousands of times at from 50c. to $1. It may be good]

3. **Magic Copying Paper.**—To make black paper, lampblack mixed with cold lard ; Red paper, Venetian Red mixed with lard ; Green paper, Chrome Green mixed with lard ; Blue paper, Prussian Blue, mixed with lard. The above ingredients to be mixed to the consistency of thick paste, and to be applied to the paper with a rag. Then take a flannel rag and rub till all color ceases coming off. Cut your sheets 4 inches wide, and 6 inches long : put 4 sheets together, one of each color, and sell for 25 cents per package. The first cost will not be over 3 cents.—*Directions for Writing:*—Lay down your paper upon which you wish to write ; then lay on the copying paper, and over this lay any scrap of paper you choose ; then take any hard pointed substance and write as you would with a pen.

[*Remark.*—A "greasy affair"—but we believe as good as the "copying papers" usually sold at the price named.]

4. **A Pure Vegetable Salve.**—One pound lard ; ¼ oz. Rosin, and 10 ounces elder bark. Boil these over a slow fire for about half an hour, then strain and put into small bottles, which sell for a shilling each.

[*Remark.*—What is the salve good for? A mixture of one ounce of lard to about two ounces of resin makes a semi-liquid salve which is excellent for putting upon tools and all metallic surfaces to keep them from rusting. The above, however, is a safer "vegetable salve" than many others sold in the country, and we should not greatly regret its general introduction, only for the "shillings" people would pay for an article of doubtful utility, and costing next to nothing to make.]

5. **Patent Gold and Silver Counterfeit Detector.**—Take 1 ounce Nitrate of Silver, pure crystals, and 1 quart pure rain water. Add together, shake well, and it is fit for use. To be put up in drachm vials, and sold for 25 cts. per vial.

[*Remark.*—This has also been sold largely and at a high price, but we can beat it. Your Nitrate of Silver would cost $1.25 per ounce, and much more if absolutely pure crystals. But a whole pound of Nitric acid costs but a few cents, and is far better for detecting base metals. Moreover, counterfeit coins are now so generally galvanized over, that the nitrate tests are of little value.]

6. **Art of Painting on Glass.**—The only difference between ordinary painting, and painting on glass, is, that in the latter all transparent colors are used, instead of opaque ones, and the colors being ground up with turpentine and varnish instead of oil. In painting upon glass, it is necessary, occasionally, to place the picture between the artist and the light, to enable the artist to see the effect, the light having the property of casting a yellowish tinge upon all colors so exposed. This art is easily learned, and affords a handsome remuneration.

[*Remark.*—This has been often sold at a high price.—Any common painter would *freely* give you more and better information.]

7. **A Useful, Easy, Lucrative Employment.**

[*Remark.*—This is half a column of stuff about establishing a business and intelligence office ; we do not think it worth the room required to insert, and show it up.]

8. **The Celebrated Chemical Compound.**—Take 1 pint Alcohol, 2 gills Nitrous Spirits Ether, 2 ounces Bichromate Potash, 2 ounces powdered Cinnamon, and 1 oz. Aqua Fortis. Mix all the above together and let it stand 24 hours, and it is fit for use. Bottle in 2 oz. vials, and sell for 25 cents. To extract Grease, Stains, &c., from cloth, saturate with cold water, dip a sponge in the liquid, and apply it, and repeat if necessary, and wash off with cold water.

[*Remark.*—This is too much for us. We don't understand the chemical relations of these ingredients. It may be all right ; we should not like to pay much for the privilege of trying it—certainly not $2, as one of our readers once did, and we know not how many others.]

9. **The Hunter's Secret.**—Take ½ lb. Strained Honey, ¼ drachm Musk, 3 drachms Oil Lavender, and 4 lbs. Tallow. Mix all together, and make into 20 pills ; one pill to be placed under the pan of the trap when setting it.

[*Remark.*—This is similar to a dozen others sold at 25c. to $5 each. They are made upon the supposition that *all* animals are attracted by the odor of musk, or lavender. If this were the case, a lady we sat by the side of in the cars, the other day, would do well to keep out of the regions of wild animals, or she might find herself surrounded by a large, and not very select or agreeable company.]

10. **To Make Soft Soap.**—Take 10 pounds of common Yellow or Rosin Soap, such as is purchased for 4 cents per pound ; 6 lbs. Sal Soda, and 10 or 12 gallons of soft or rain water. Cut the Soap into small pieces, and put the whole over a fire ; bring the water nearly to a boiling point, and allow it to remain at that temperature until the Soap is entirely dissolved. It may then be taken off, and when cooled, it will become thick and livery. The Soap made with these proportions will be found to be too strong, and cold soft water can be added until it becomes of the proper consistency and strength.

[*Remark.*—An old recipe, sold ten thousand times, at varying prices, by advertisers and by traveling men and traveling women. Some of our neighbors paid 50 cents a piece for it. We do not know of any yellow soap sold at so low as 4 cents per lb. A little Sal Soda added to any common soap, hard or soft, makes it more strongly alkaline, but much of it will injure the fabric to be washed.]

11. **Patent Starch Polish.**—Take common dry Potato or Wheat Starch, sufficient to make a pint of Starch when boiled. When boiling, add ½ drachm Spermaceti, and ½ drachm White Wax ; then use it as common Starch, only using the Iron as hot as possible.

[*Remark.*—We suppose every body, at least all our readers, for we have often told them, knows that a little spermaceti added to starch, gives it a higher gloss, and white beeswax has a similar effect, we believe.]

12. **To Make Cider Better than that made from Apples, and which does not Intoxicate.**—Put in a tub 5 gallons of lukewarm water, 1 lb. 2 oz. Tartaric Acid, 6 Copper Cents, 3 pints Brewer's Yeast, stir until all is dissolved ; then add 25 gallons of lukewarm water ; let it stand a short time, barrel up, leave the bung out until the yeast is worked off, then bung up, and it is ready for use. It will keep seven years.

[*Remark.*—A villainous, poisonous compound ; probably the same as the recipe extensively advertised and sold as "Western Cider" at 25c per buyer. It would be sour, and have the "pucker" of cider, owing to the poisonous copper salt formed by the cents. To follow the directions as above given, would require 'considerable' stirring, for if we mistake not it would take a good many days for the cents to dissolve. Don't touch the compound, and advise your friends not to, unless they would die of slow poison.]

13. **Rheumatic Liniment.**—Oil of Sassafras, 2 oz ; Oil of Hemlock, Oil of Red Cedar, Oil of Turpentine, of each 1 oz.: Gum Camphor and Capsicum, of each 1 oz.: and add two quarts of Alcohol, shake well together. Rub in with the hand or a flannel rag.

[*Remark.*—We can't say whether this be good or bad. Seven ounces of these oils, gum, and pepper, to only two quarts of alcohol would be strong enough to scare out any respectable rheumatism. The ounce each, of oil of turpentine, gum, and capsicum, would be the most that we would venture to add to two quarts of alcohol of moderate strength.]

14. **Magnetic Ointment.**—Elder Bark, Spikenard and Yellow Dock roots, of each 1 lb.; boil in two gallons water down to one ; then press the strength out of the roots and boil the liquid down to half a gallon ; and add 8 lbs. best Rosin, 1 lb. Beeswax, and Tallow enough to soften. Roll into rolls, and apply by warming and spreading on linen.

[*Remark.*—This may be a good ointment, but we can not see where the "magnetic" comes in, or comes out ; would not the term "magical" do as well ?]

15. **Indian Pills.**—Aloes 3 ounces ; Gamboge 1 ounce ; Castile Soap 1 ounce ; Extract Gentian 2 ounces ; mix the articles before adding the extract ; then make it into a mass, add water if the extract is not soft enough. While working it up, add by degrees 1 drachm Oil of Peppermint. Make pills of common size.

[*Remark.*—What are these pills good for, and how many are to be taken for a dose, and when ? How are we to make a fortune of this one, or of any of the preceding. We are given to understand that with any *one* of these fifty recipes we can make a fortune.]

16. **Beautiful Bright Red Ink.**—Cochineal 2 ounces, bruised ; pour over it 1 quart boiling water and let it stand. Boil 2 ounces Brazil wood in one pint soft water, for half an hour, and in twenty-four hours, mix the two together. Dissolve half ounce Gum Arabic in a pint of hot water, and when cool add to the other, stir well, bottle, let stand one week, then strain through muslin.

[*Remark.*—This will make a *red* ink, but carmine-red ink is much superior, and better for all ordinary purposes.]

17. **Superior Blue Ink.**—Prussian Blue 6 parts, Oxalic Acid 1 part, triturate with a little water to a perfectly smooth paste, and dilute with the proper quantity of water. Add Gum Arabic.

[*Remark.*—How much gum ?]

18. **Indelible Ink for Marking Linen without Preparation.**—Nitrate of Silver 1½ ounces, dissolved in 6 ounces liquor Ammonia Fortis, Orchil for coloring, 1 ounce, Gum Mucilage 12 ounces. The best extant.

[*Remark.*—This may be the best extant.—What that "Orchil" is for, we don't know. Nitrate of silver will make it *black* enough surely.]

19. **Luminous Ink—Shines in the Dark.**—Phosphorus ½ drachm, Oil Cinnamon ¼ ounce ; mix in vial, cork tightly, heat it slowly until mixed. A letter written with this ink, can only be read in a dark room, when the writing will have the appearance of fire.

[*Remark.*—Pretty to play with—but useless otherwise. Any other cheaper oil, flowing freely, would do quite as well. We don't see any fortune in this.]

20. **Red Ruling Ink.**—Best Carmine 4 grains, rain water 1 oz. Aqua Ammonia 40 drops, add a little Gum Arabic water.

[*Remark.*—Probably good, what there is of it.]

21. **Yellow Ink.**—A little Alum, added to Saffron, in soft hot water, makes a beautiful Yellow Ink.

[*Remark.*—A yellowish fluid, of no practical value—no fortune here !]

22. **Invisible Ink.**—Sulphuric Acid 1 part, water 20 parts ; mix together and write with a quill pen, which writing can be read only after heating it.

[*Remark.*—Of very little utility.]

23. **Superior Water Proof Composition for Leather.**—Boiled Oil 16 parts, Spirits Turpentine 2 parts, Beeswax and Rosin 1 part each, Venice Turpentine 2 parts ; mix and use hot.

[*Remark.*—What kind of oil ?—How hot on leather.]

24. **Gun Powder.**—Nitre 76 parts, charcoal 14 parts, Sulphur 10 parts ; mix.

[*Remark.*—Just so. Please send along the recipe for getting up the Powder mills, and the careful hands to work them, and also the required capital.]

25. **Shaving Soap.**—Take 4½ pounds White Bar Soap,

1 quart rain water, 1 gill Beef's Gall, and 1 gill Spirits of Turpentine: cut the soap thin and boil five minutes; stir while boiling, and color with half ounce Vermillion; scent with oil of Rose or Almond.

[*Remark*—Too much gall and turpentine, and vermillon, for a pleasant soap to think of. But we can't make he fortune out of this, without another recipe for inducing men to shave (their faces) more than they now do.]

26. Hard Solder.—Copper 2 parts, melt; add tin, 1 part.

27. Soft Solder.—Tin 2 parts, Lead 1 part; melt.

[*Remark*—What shall we melt the copper in? What shall we use the hard solder for? Rather too much tin in the soft solder.]

28. Silver Platino Fluid.—Dissolve 1 ounce of Nitrate of Silver in crystal, in 12 ounces of soft water. Then dissolve in the water 2 ounces Cyanuret of Potash. Shake the whole together, and let it stand till it becomes clear. Have ready some half ounce vials, and fill them half full of Paris White or fine Whiting; and then fill up the bottles with the liquor, and it is ready for use. The Whiting does not increase the coating power, it only helps to clean the articles, and to save the Silver Fluid, by half filling the bottles.

[*Remark*—This, without the Paris White, will usually leave a thin film of silver on bright metal surfaces, but needs the aid of a galvanic battery to deposit a durable silver coating.]

29. Great Pain Extractor.—Spirits of Ammonia 1 ounce, Laudanum 1 ounce, Oil Origanum 1 ounce, Mutton Tallow half pound; combine the articles with the tallow, when it is nearly cold.

[*Remark*—Does the adjective great refer to the "pain," or to the "extractor"? We don't know how great a pain his would extract.]

30. Matches.—The ends of the tapers, or wood, should be very dry, and then dipped in hot melted Sulphur, and laid aside to dry. Then take 4 parts of Glue, dissolve it, and when hot, add 1 part of Phosphorus, and stir in a few spoonfuls of fine Whiting, to bring it to proper thickness.

[*Remark*—We tried this when a boy, but the phosphorus would take fire when added hot, or heated. Moreover, the match factories furnish ready made matches cheaper than we could whittle out the wood. Home-made matches don't pay, now-a-days.]

31. Process of Taming Horses.—This consists in using a medicine. There are three different articles used. The medicine has the effect to make the horse remarkably affectionate. It creates fondness, and you keep this fondness up by kind treatment, &c. The articles are used in the nostrils. One is a powder, the other articles are Oils. The powder is used first. A common sized quill full in each nostril, of the powder, and two drops each of the oils. The first article used is the button from the horse's leg. You procure this and dry it, and pulverize it as fine as you can; then use it as stated above. The oils are the oils of Rhodium and Cumin. This will cure stubborn horses, that refuse to work, &c. Some make high wages by breaking cattle and horses by this process.

[*Remark*—This nonsensical and utterly absurd recipe has for a long time been advertised and sold to the more ignorant classes at prices varying from $1 to $5. Only last Summer a man tried to hire us to insert an advertisement offering it to any one who should send him $2. He professed to have got his information from Mr. Rarey.]

We have not room for the remaining 19. These will be given in our next, with notices of some other "advertisements."

Scientific and Practical Talks about Manures....I.

INTRODUCTORY—HOW PLANTS GROW.

Many millions of dollars are annually expended for manures in our country, especially in the Eastern or older sections. At the West, where a virgin soil is yet rich in organic treasure — the leaf-mold and the grass-mold accumulated during centuries past—the subject of manures has not required nor received much attention; yet the constant disappearance of these natural deposits, and the economy of husbanding the materials now in possession, annually render this subject more and more important to Western cultivators. It is not a fanciful or hap-hazard assertion to say, that for all the time and labor expended in accumulating and applying fertilizers, the country over, the returns, the profits, are not half what they would be if people knew just when and how to apply these fertilizers to the best advantage. The subject of manures is, therefore, one of the highest magnitude, and demands constant attention.

We have been almost censured by some for the comparatively little space we have hitherto devoted to so important a subject. It may be said in excuse, that we are unwilling, on this or any other topic, to try to enlighten others where we are ourselves in the dark, merely for the sake of appearing to be wise. The theory of manuring is not fully understood. The most erudite scientific men are yet groping in the dark; even Liebig has had occasion to change his views and his teachings more than once within twenty years. The agricultural chemists, who were yesterday all confident in their mineral theories, are today hesitating, doubting, retracting. In illustration of this we cannot do better than to repeat a recent quotation from Prof. Johnson, who spent a year or two with Baron Liebig, and whose constant devotion to the science of agriculture, entitles his opinions to weight. He says:

"We are every day drifting further from what but a few years ago was considered one of the most fixed and beneficial principles of agricultural science; viz.: that a substance is chiefly a fertilizer because it directly feeds the plant; and are learning from the numerous recent and carefully conducted experiments with manures, that in very many cases we cannot safely venture to predict what will be the influence of a given application; but find in practice the strangest and most discordant results, it being possible to show from the experiments of the farm that almost every fertilizer in use has, in some instances, proved beneficial to every cultivated crop, and in other cases has been indifferent or even detrimental."

Among the most intelligent cultivators the greatest diversity of practice—practice founded upon observation, too—still exists. Our own former opinions, once thought to be surely founded, are constantly yielding to new light, and we confess to having less and less confidence in what *now* seems to be well established theory. We must then be excused for hesitating in discussing theories where so much doubt yet exists.

Still, the best way to arrive at correct conclusion is to agitate the subject, to state theories, to collect facts, to make experiments, etc. We purpose to take up the subject of manures in a somewhat formal series of articles, introducing what appears to us to be the best theory of the action of manure, and the best practice derived both from theory and observation. This discussion will be valuable to every cultivator.

As manures are designed to enter into or stimulate the growth of plants, it will greatly assist to an understanding of the subject if we first briefly inquire in a general manner

HOW PLANTS GROW.

When a seed of any kind is placed in the soil near the surface, with the aid of warmth, moisture, and air, it germinates or sprouts. One little shoot, called a *radicle*, grows downward, and sends forth branching roots. Another shoot, called a *plumule*, starts upward towards the light. At first these shoots are nourished by the substance or meat of the seed. But afterward, the roots, or leaves, or both, gather food from the air.

As fast as food is obtained and appropriated, the plant increases in size, and constantly sends out new leaves and new rootlets. The process of growth is similar in all plants—in grasses, grains, trees, etc. The spire of grass or of grain gets its food, circulates its sap, and increases in bulk, as does the apple tree or oak.

Let us now, for convenience of illustration, take the partly grown tree, and inquire where and how it gets its food, remembering that all wild and cultivated plants are nourished in a similar manner. If we carefully wash away the soil around a stalk of growing corn, or the base of a tree, we shall find the larger roots subdivided into smaller and smaller branches, until they terminate in an immense number of minute fibers (many millions on each plant), the smaller ones being too minute to be seen without a magnifying glass. The roots draw in water or sap from the soil, and carry it to the base of the stem. This water or sap contains dissolved matter, which takes part in the nourishment of the plant. The roots serve not only to gather sap, but they also attach the plant to the soil, and sustain it in an upright position.

The roots converge at or near the surface of the ground, and form the *stem* or trunk. This consists essentially of long fibers closely packed together, with contiguous cells extending from the roots up to the leaves. The branches or limbs are only subdivisions of the trunk itself.

The *leaves* are in reality an expansion of the stem above, just as the roots are an expansion of its lower end. The frame-work of the leaves, is made up of a series of cells packed together in two layers—an upper and lower one—and covered over with a thin layer, or *epidermis*.

It was formerly supposed that the food of the plant came from the ground. This is a mistake. The greater part of the plant food comes from the air. [Just how much comes from the soil, and how much from the air, and whether the food is mainly carried into the plant through the leaves, or chiefly through the roots, dissolved in rain water, are points upon which scientific men differ. These are important questions, for upon them depend the theory and practice of manuring, the best kinds and forms, etc.]

Illustrations.—1st. A few feet of soil, made up chiefly of clay and sand, will bear a majestic tree, containing many cords of wood, in which are scores of bushels of charcoal. This wood and this charcoal could not have come from the few feet of clay and sand. 2d. A few pounds of grass seed on an acre of loam (sand and clay) will yield tun after tun of hay, without diminishing the soil in bulk. In fact the soil is increased somewhat. This hay can not come from the soil. The truth is, *the great bulk of trees, of hay, of corn, and of all other plants, comes from the air.* 3d. When a log or a heap of manure rots, or when wood and coal burn up, they are not annihilated; but their little particles go off into the air, one by one, and float about unseen. These separate particles are each so small that we can neither see them depart, nor see them after they are in the air. Nor can we see them as they are again gathered by the leaves, or by rain water, until a great number are united together in the plant. But it is nevertheless true that new plants are thus made up of the very materials of which other plants were previously composed. And so the process of decay and new growth goes on in one continual round.

These general explanations will be found useful in discussing what kinds of manures to use, and how to apply them, which we shall talk about hereafter.

Chloroforming Bees.

We have heard of several instances where chloroform has been used to stupefy bees in examining hives for moths or other purposes, in removing honey, and in transferring bees from one hive to another. It is only necessary to close the hive sufficiently to prevent egress, and then place in it at some point, a sponge or cloth saturated with a little chloroform so as to fill the hive with the vapor. As soon as the bees are sufficiently stupe fied, open the hive, perform whatever operations are desired; then ventilate with fresh air sufficiently to remove any remaining vapor, and the next morning the bees will be as active and lively as if nothing had happened to them. No harm will ensue, if the chloroforming be not carried on at first to a needless degree and length of time.

Bees Swarming Without a Queen.

[We have a large accumulation of communications on Bees, some waspish, some honied, and most of them need combing. We are retaining them in our hive until we can get a little more time to strain out the real honey they contain.—Ed.]

To the Editor of the American Agriculturist:

As an indication that the queen does not always announce when the young swarm shall leave the old hive, I will relate an incident as it transpired some years since at my apiary.

In our Southern country, where the heat becomes oppressive sometimes as early as April and May, the bees congregate on the outside of the hive in large numbers, so as to give the insiders more air and room for the proper rearing of the young. At several of my hives these outsiders, thus early, were very numerous; rather an indication of early swarms. One of these hives refused to swarm, although exceedingly strong in bees. Most of the other hives swarmed in June. On July 3d, I discovered great uneasiness among the outsiders of this hive, and this continued during the entire day. I became uneasy lest they might be killing a queen. On the following day the agitation among the numerous outsiders became still greater; and at one o'clock they all, at one time, left the hive, swarmed a short time, and, finding that the insiders would not join them, they bolted back into the hive. After a short delay out they came in increased numbers, settled, and were easily hived. When they returned to the hive they first imparted their agitation to all insiders, then took their farewell stock of honey in, and swarmed in regular order. This novel proceeding I have witnessed several times; but all hives that have thus thrown out a swarm have invariably died off, probably for the want of a queen, which was in this irregular way forced to leave the hive. J. B.

Forsyth Co., N. C.

Why Don't the Hens Lay?

To the Editor of the American Agriculturist:

Last Summer my one dozen hens gave me nine and ten eggs regularly every day—Sundays not excepted; but now, when the neighboring grocer charges "four for a shilling," (three cents each.) the egg fountains, as old Diogenes has it, are all sealed up, and 'nary egg' has been the tune for a long time. Pray, sir, what is the cause of this falling off? It cannot be for the want of food, as I make it a point to keep corn constantly by them; and when there is no snow on the ground, I give them water. There is also an open hovel that they can take shelter under and roost in, although I find many of them prefer to spend the night in the tops of the neighboring apple trees; and, singular as it may seem, the colder and more forbidding the night, the higher they go for a roosting place. Now, if there is anything more I can do for them, please inform me, a recent subscriber to the *Agriculturist.* J. S. Angell,

Addison Co., Vt.

Remarks.—In the Summer the fowls obtained an abundance of animal food—worms, grasshoppers, bugs, and other insects. In the Winter these supplies are cut off. Try feeding them daily with bits of refuse meat, and see how eagerly they will devour them. Some kind of animal food is almost indispensable for laying hens. Milk, or milk curds, make a good substitute. Scraps or meat cake, easily obtained in large quantity and cheaply from the lard or tallow triers, are very good for fowls. (In this city it is sold at a low price, in large cakes, the size of a barrel head, and eight to twelve inches thick—sometimes in square form.) The price is usually about $20 per tun—one cent per pound. Let the fowls have meat in some form. In Summer they get green vegetables. In Winter let them have cabbage leaves, turnip tops, or potatoes or turnips boiled. Corn is passably good for fattening, but not to make eggs out of alone. Oats contain more egg material. To lay *well* they should have warm quarters, where water will scarcely freeze. Let them always have plenty of unchilled water; snow is a poor substitute. They want a scratching place, or, at least, access to gravel; and without lime they cannot make egg-shells. Finely-powdered bones or oyster shells, or old mortar, supply lime, which they must have in some form. They have constitutional objections to laying eggs without shells. An ash heap, to roll in is good to keep off insects. Access to the sun on warm days they will plainly show you is a treat they enjoy. In short, give them meat or milk for animal food, with some soft vegetables; lime, to make shells of; plenty of water to drink and supply the liquid part of the egg; as much mixed grain as they like to eat, and gravel to grind it with; clean, warm houses and nests, with air and sunlight, to keep them healthy, and you will unseal the egg fountains. The nearer their Winter food and habits can approach to those of Summer, the nearer will the supply of eggs be equalized.

For the American Agriculturist.

"Westward Bound."

Doubtless, there are many attractions in farm-life at the West. The fertility of the virgin soil, the abundance and cheapness of land, and the comparative ease of cultivating it—especially prairie-land—the satisfaction of gathering large crops, and the prospect of rapidly acquiring wealth; these and the like things make many young farmers at the East discontented with their lot, and lead some annually to sell their homes, and to push towards the setting sun.

Some succeed according to their expectations; but very many do not. Land purchased, proves inferior to what it was represented; the improvements needed upon it, absorb all the profits for many years; contemplated railroads, or other facilities for getting crops to market, are not constructed; sickness in new forms invades the household; long separation from old friends and kindred begets sadness and discontent; and, finally, nearly all the members of the family mourn the day when they set out to seek their fortunes at the West.

We, by no means, counsel all young farmers to remain at the East. "Westward the star of empire takes its way," and many should follow it. But let every man think twice before he makes the final resolve. It is no light thing for one already comfortably situated, to sell out house and home, and start in life again amid untried scenes. Even if ordinarily successful in acquiring property, he is compelled to sacrifice many things of great value. This is especially so, if the homestead he sells, is one which has descended to him from his ancestors, and if he is surrounded by kindred and friends whom he has known and loved from childhood. The land he would sell, bears traces still of his forefathers' footsteps. The house was also the home of those who gave him birth. Yonder fruit-trees were planted by his father. His grandfather set out the venerable elms which overshadow the lawn and the gates by the roadside. By the little brook, overhung with willows, he played with his sisters in childhood. Across yonder field, winds the foot-path where he went to the village school. Beneath those maples, at the corner of the street, he plighted his love to the fair maiden who has since become the mother of his children. From his window he hears the Sabbath bell which called his fathers for several generations to the house of God; and, not far away, is the burial-place where their sacred dust reposes.

He who sells out such a home, parts with something which money can not buy, but whose value he does not fully appreciate until he has lost it. He separates himself from scenes and influences which can not possibly be found in a new country, however fertile its soil or beautiful its scenery.

[Remarks.—With the general spirit of the above we freely concur. When one *can* remain upon the old homestead it is advisable. The same energy and active enterprise which would secure competency and wealth at the West, would almost invariably renovate the old farm, and bring it up to a high point of fertility and profit. But there is not always room in the old hive for all the young swarms. Some must go forth, or be driven forth, to seek new quarters; and such can often do better at the West, where cheap land and a virgin soil invite their occupation. If a young couple start out early, and locate not too far into the wilderness, the chances are, that in our rapid growing country, society, schools, and churches, will be well under way by the time their children are old enough to greatly need them. We certainly think it better for some of the younger members of a neighborhood to push out to unoccupied fields, taking each other's sisters with them as helpmates, than for half a dozen sons, more or less, to hang like drones around the old hive.

We have witnessed many a parting scene, where one or more of the sons and daughters from a household were taking their leave of the paternal roof, to strike westward, full of buoyant hope; and, though there are always certain melancholy thoughts at such times, yet, on the whole, the season is one of great interest to us. The young men and women thus starting out, are going to take their places as actors in the great and growing western portion of our Confederacy. And they make worthy citizens there. We have traveled in the far West somewhat, were born and brought up in what was once considered "*the* West," and we but speak what we feel and know, when we say that these western people who have early left the eastern hives, are among the most enterprising, worthy, substantial citizens of our land. Let those who can find room, and who are so inclined, remain East—the more the better—but we would not discourage the young, the active, the enterprising, from seeking their homes and their fortunes towards the setting sun.—Ed.]

Standard of Value.—The worth of every thing is determined by the demand for it. In the deserts of Arabia, a pitcher of cold water is of more value than mountains of silver and gold.

For the American Agriculturist.

How Stand your Accounts?

[The general tenor and spirit of the article below we readily endorse. On large farms, and even those of moderate size, the books for accounts recommended should be kept. On small farms, where there are but few transactions, one or two books will suffice, with different pages allotted to the several topics to be noted down. In some cases a few sheets of paper, stitched together in book or pamphlet form, will answer as a temporary resort, at least until it is practicable to get a good, well bound, permanent farm book. Keeping accounts, and writing down in a journal the various transactions upon the farm, is a capital exercise for the boys, and the girls too. Had we not early learned to use the pen, and to express our thoughts, by keeping a full minute record of all that transpired upon the farm, even to the smallest item, we are quite sure we should not be using our pen here to-day.—ED.]

Not one farmer in ten has any system of book-keeping, by which he can tell at the close of each year how he stands with the world. Most farmers probably have an account of their debt and credit with those with whom they have business dealings, but they keep no account with themselves. No estimate is made of the articles consumed by the stock, or by their families; and no account is kept with particular crops, or particular fields, to know whether one crop pays better than another, or whether they pay at all. Accurate knowledge of the cost of crops, of the cost of animals sold for meat, of the profits of raising poultry, beef, pork, or of any item of farm economy, is the rarest of all knowledge among cultivators. One is occasionally met with who is booked up, and can show you, in black and white, what it costs to support his family, what are the expenses of each crop cultivated, what field gives the best returns for the labor expended upon it, and who is able to tell whether farming pays, and how well it pays. But such a farmer is exceedingly rare.

The common practice is to keep as even with the world as possible, and to leave the rest of the business to take care of itself. It is well known that farmers are more slack in keeping payments square than any other class of business men. They trade and barter with each other; "pay in their way," as the phrase is, which means to pay in anything the creditor happens to want, when it suits the convenience of the debtor to pay it. If the farmer sells a lot of fat wethers to the butcher on three months' credit, he expects his money at that time. But if he sells a lot of stock sheep to his neighbors, he will not insist upon any particular time of payment, and he will get his pay in two years, perhaps, in a pair of steers. Not unfrequently accounts so run on unsettled five, ten, and even twenty years.

Now, all this is bad policy. "Long friends and short credits" is as sound a maxim for the farmer as for any other class of the community. If the farmer has anything to give away, let him give it, and settle the account of charity. But in the way of business he should school himself to be prompt in payment of debts, and compel the same promptness in others. It is essential to his own peace of mind, and to his success in business. A farmer can no more afford to do without account books than a merchant. He should accustom himself to clear ideas of his business, to know what belongs to capital invested, what to working expenses, and what to profit. It is in this way only that he can tell at the close of each year whether he has gained or lost. He should bring himself to account at the close of every day for every pecuniary transaction he has had with others.

A proper system of accounts for a farmer is, first, a *cash book*, in which are entered all monies received and paid out; second, a *journal*, containing all deliveries of stock or farm produce, and all articles received; third, a *stock book*, in which should be entered all additions to the animals, tools, land, and everything that constitutes capital in the business, and all subtractions from the same; and fourthly, a *ledger*, in which separate page accounts should be kept, debt and credit, with all persons with whom he has business dealings Besides these, it is important to have a *wages book*, showing, at a glance, how the account stands with each laborer upon the farm, and how much is paid out for labor, and an *invoice book*, containing all bills of account. It is also of great importance to keep accounts with particular fields, to ascertain what are the returns for particular crops, under a given mode of treatment.

The farmer should always have some experiment on hand, suggested by his own reading and observation, risking more or less according to his means. In this way he will gain some definite knowledge every year, and his brain power will increase with his capital. Nothing is wanted more than a good system of book-keeping upon the farm. It, of course, involves some expense, and considerable time and painstaking; but it will pay better than any other labor, for it will show what labor pays best, and give a wise direction to all operations upon the farm. Now is a good time to commence farm accounts. *

For the American Agriculturist.

Errors in Shoeing Horses.

[The proper shoeing of horses is an important topic. There are comparatively few good shoers even among old blacksmiths, as almost every one knows by experience. We have a horse that, though shod by an "old hand at it," would somehow get lame. A change of shoers stopped the lameness; and this is the experience of many others. Any hints on the subject will be gladly received. The following is from a practical blacksmith, who says, "It is poorly done, as a blacksmith's hand is in poor order to write in cold weather." The writing was certainly well done; the correctness of his advice we leave for discussion by his fellow artisans. If they have any exceptions to make, let us have them. We would almost be willing to print an error or two, just to wake up a discussion on a subject of so great interest to horse owners, as well as horse-shoers.—ED.]

Crippled and hoof-bound horses are becoming more and more common where they are used on hard roads, and the methods of shoeing adopted by many blacksmiths to prevent lameness, in the opinion of the writer, only increase the evil. Usually shoes are made with the nail-holes too near the toe. This leaves the heel unsupported, and throws the strain, in traveling and pulling, about midway between the heel and toe, which is the weakest part of the hoof. Often, when the shoes are removed, the sole of the foot is found torn loose from the hoof at the heels, leaving sores called corns. This is more common with heavy wide-footed horses, though the same style of shoeing will produce it in all.

Burning the hoof with the hot shoe, to fit it to its place, is often practiced. A number of years' experience has taught me that this should not be done. When a horse's hoof is properly trimmed, the sole is less than a quarter of an inch thick : burning will crisp and destroy the life of the seam, causing the sole and hoof to separate. This is followed by sprawling and rottenness of the hoof, lowering of the sole, turning up of the toe, and general ill-shape of the foot, and the horse becomes a clumsy cripple.

Horses likely to become hoof-bound, generally have small, tough, horny hoofs of rapid growth; but, with proper care, they may be kept free from lameness. If the shoe be not properly fastened near the heels, it causes the toe to incline forward, the sole becomes hard and dead, the heels contract and the frog is injured. Lameness must follow from the action of the coffin joint being retarded.

To keep the foot in its natural shape the shoe should be made to fit wide at the heels; the "calk" should stand square, inclining a little outward. The shoe should be nailed well back towards the heels, say from an inch and a quarter to two inches from the calks, thus securing it solidly from heel to toe. When the foot is in its natural shape, as strong a nail hold can be had at the turn of the heel as anywhere about the hoof.

The clip, or upward projection from the shoe, used by many, is worse than useless. The hoof is weakened by the notch made to receive it, and is injured by the burning given to fit it in. By this treatment horses whose feet have been worn short at the toe, have often been lamed by crisping the sole and affecting the quick, causing it to fester in a few days after shoeing. After a horse's feet have been thus maltreated, it will most generally take from six months to a year's proper care to restore them to a sound condition.

A shoe properly put on should remain from ten to fourteen weeks. If a horse is shod oftener than once in two months, there will not be sufficient growth to afford a solid hold for the nails.

Dearborn County, Indiana. M. B. KERR,

HOW MANY HORSES.—According to the new American Cyclopædia, the number of horses in the world is estimated at fifty-seven millions, (57,420,000,) or one horse for every twenty-one inhabitants, young and old. In Europe there is one horse for every eleven persons. Denmark has forty-five horses to every one hundred inhabitants, or nearly a horse for each two persons. The United States are put down as having 5,000,000; France, 3,000,000; Russia, 3,500,000; Great Britain, including Ireland, 2,500,000; Austria, not including Italy, 2,600,000.

A SHREWD WORKMAN.—A journeyman weaver took to his employer a piece of cloth he had just finished. Upon examination, two holes but half an inch apart were found, for which a fine of two shillings was demanded. "Do you charge the same for small as for large holes?" asked the workman. "Yes, a shilling for every hole, big or little." Whereupon the workman immediately tore the two small holes into one, exclaiming, "that'll save me a shilling anyhow." His employer was so well pleased with his wit that he remitted the whole fine.

Friendship is more firmly secured by lenity towards failings, than by attachment to excellences. The former is valued as a kindness which cannot be claimed, the latter is exacted as the payment of debt to merit.

Common swearing argues in a man a perpetual distrust of his own reputation among his fellows

Cutting Feed too Short for Stock.

To the Editor of the American Agriculturist

My cattle have abundantly paid me for helping to do their chewing by using a feed cutter. They take hold of straw and stalks much better than formerly, partly perhaps because it is so much more convenient for them, but principally, no doubt, because of the shorts, bran, or ship stuff, mixed with it, which I find make it as good as hay. It always appeared to me, however, that there was danger of having too much of a good thing, by cutting straw too fine, and leaving stock little or no use for their teeth. One of my neighbors has found this out to his cost. He keeps several horses, and has cut their feed, principally oats in the sheaf, quite fine, less than an inch long. He lost three horses last season from inflammation in the stomach and intestines, caused without doubt by their having swallowed much of their food without chewing, where it remained undigested. From an inch and a quarter to an inch and a half is about right. I think that some people make a mistake in cutting up too large a quantity of hay or straw at one time. One man attaches his horse power o a large cutter, and runs through hay and straw enough to last him a week or a fortnight. Before it is used up the goodness is pretty well dried out of it, and it is too much like chips, to taste well to the cattle, or to be of much service to them—this at least is the opinion of JONATHAN.

REMARKS.—We think Jonathan is mistaken. Our rule is to cut the feed as short as possible, for horses especially. We see no more danger of their swallowing short bits of straw, than there is of swallowing oats unmasticated. The horses referred to must have taken sick from some other cause than eating short cut feed. For ruminating animals, that is those that chew the cud, it is well to let them have long feed enough, mixed with the cut stuff, to make up the cud balls in the stomach; but for horses and swine we would cut the straw as short as possible. We cut all the hay for horse feed, and the greater part of that for cows. Nor is there the danger of drying out, when a mass of hay and straw is cut up, and left in a pile. A little water may evaporate, but it is replaced when the food is wet for mixing with the bran or ship stuff.—ED.

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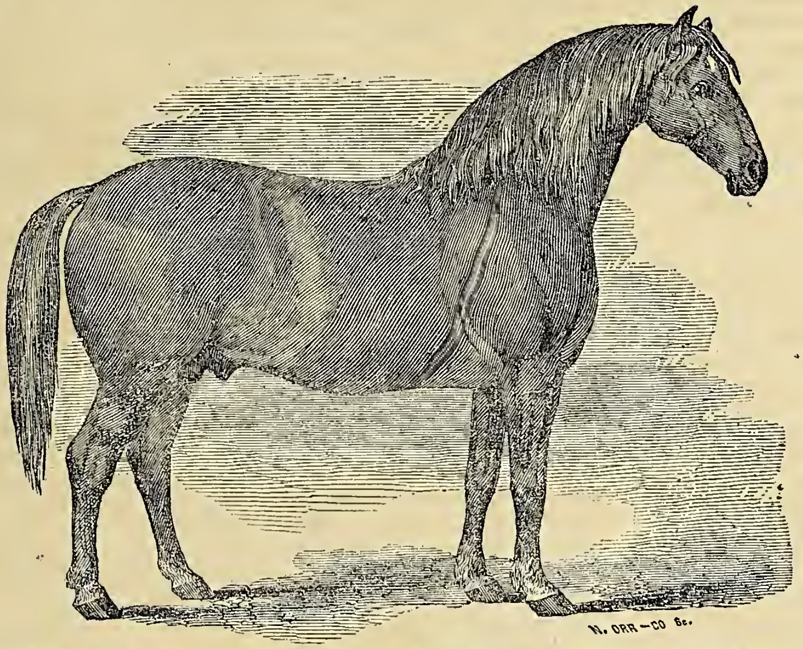
"Hungarian Grass" bad for Horses.

To the Editor of the American Agriculturist.

Last Winter several horses in this vicinity became seriously affected with stiffness of the joints, so much so as to be scarcely able to walk. In nearly every case they were in good condition when attacked, having been well fed on Hungarian hay or millet. The season was very severe on work horses—an open Winter and mud deep. But as animals fed on other hay were exempt from the disease, the general belief is, eating Hungarian hay was the cause of the difficulty—not perhaps the hay itself but its seed. Here it is allowed to mature its seed before cutting. Perhaps for horse feed it should be cut while in blossom. One of my neighbors fed it to sixteen cows and says they gave more milk and did better than ever before. For feeding to cattle I think the testimony is all in its favor. W. L. J.

Elvaston, Hancock Co., Ill.

REMARK.—The above is rather inexplicable. The so-called "Hungarian Grass" is a millet, and we should doubt its injuring animals eating either the straw or seed. Perhaps the horses referred to were fed too high, or there may have been some other special cause wholly unconnected with the kind of feed that was given.—ED.]



AN AMERICAN CART HORSE, AND ROADSTER.

(Engraved for the American Agriculturist.)

The Cart Horse.

American cities have now become so large and numerous, that they require an immense number of cart horses to do their work. We do not know of any systematic course among our farmers of properly breeding this highly valuable and much wanted variety of the horse, nor do we believe such to exist at present, to any great extent, in any district in the United States. The large wagon horse, as bred by the descendants of the Dutch settled in Pennsylvania, comes nearer the desideratum than anything within our knowledge; but as a general rule these horses are deficient in several important particulars. We speak in *general* only, as there are occasional individual exceptions among these animals, which closely approach perfection, and may serve as models.

The beau ideal of a cart horse may be found in the celebrated painting of the "Horse Fair," by Rosa Bonheur, particularly in the figure of the Norman dapple grey, and two or three others in the foreground. Few out of our city, however, have the advantage of seeing that celebrated painting, and we have therefore endeavored to get up an engraving of a cart horse, somewhat refined on the European model, and better suited to American taste. But the artist has not caught our idea exactly, as the figure should have shown still greater strength and solidity than it does. Such a horse will do pretty well, however, for the cart, and makes an admirable roadster.

The cart horse should be 16 to 17 hands high over the withers, and weigh 1300 to 1500 lbs. He should have a fine head and well set neck; short, strong back; deep, full quarters; wide chest; upright shoulders, rather than oblique wide, sinewy, flat legs, as clean of hair as possible; short, strong pasterns; clear hoofs, rather broad than otherwise; heels well set up, being the reverse of flat footed. He should have a fast walk, his ordinary gait three and a half to four miles an hour; be docile and courageous.

To obtain such animals as rapidly, and at the same time as cheaply as possible, American farmers should import the best and most suitable Norman or English stallions. The walk of the best bred of these animals is not only quick, but their trotting action is fine, and fully equal to five to seven miles an hour over a good road, drawing a heavy load after them. These qualities not only fit them for the city dray, but also for all kinds of farm and general road work.

Large, well-bred mares should be selected and bred to these stallions, when the produce would be found all that is required. Our farmers might commence moderately working colts thus bred, at *two years old;* for if well fed and cared for, at this age they are as strong as ordinary horses at three and four years old, and are perfectly able to do all ordinary kinds of farm work. The breeder thus gains one to two years on every colt he raises, thus greatly cheapening their production. At five and six years old they may be taken to the city for sale, where they would readily command from $200 to $300. This is the best English system of rearing cart and heavy road horses, and our farmers will see that it can be as easily practiced here in America. In fact, it is already done so to some extent in Upper Canada and the Western part of the State of New-York, and other districts. A Norman stallion or two have been introduced into New-Jersey and Pennsylvania. The writer now has the get of one of the above, at work in this city in a dray, and another, the produce of a Sussex stallion. Both of these are excellent cart or road horses, and make a good figure in harness.

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A Good Talk on Cattle Breeding and Feeding.

At the recent annual meeting of the Agricultural Society of East Derbyshire (Eng.), Dr. Hitchman, made some off-hand remarks on selecting, breeding, and the care of cattle, which were characterized by most excellent, sound, practical common sense. We subjoin from the Derby Journal the following report, which will be found worthy of perusal by every reader of the *Agriculturist.* The allusions to this country are flattering, and will be especially gratifying to such men as Mr. Thorne, and others, who have so liberally devoted their wealth to securing for our country the best cattle in the world. But hear Dr. Hitchman:

We are living in an age of intense competition, and need all the aid we can afford to each other. Other nations are emulating our industry; our brother Jonathan, on the other side of the Atlantic, is "going ahead" as to agricultural matters in boldness—if not in discretion. His agricultural implements are of the most simple and effective character; and his zeal is shown in the fact, that he does not hesitate to give a thousand guineas ($5000) for a very first class Short Horn bull. This is, indeed, a "fancy price," and one which few even ardent patriots could afford, yet, nevertheless, *Jonathan is wise in his generation.* The consumption of meat in this country is becoming enormous. London alone requires two millions of sheep and upwards of five hundred thousand beasts for its annual supply. And, again, when we reflect upon the energetic labors that are going on in our mining districts, when we learn that Derbyshire, with some aid from its sister county, Nottingham, raises nearly four millions of tons of coals annually, we can not but conclude that the men who perform these enormous labors must require a large supply of animal food.

The Short Horn tribe of animals is peculiarly adapted to the rich lands of Kentucky, and America is determined to cope with us in "meat-stuffs," as she already does in "bread-stuffs," and as a nation we must look to our laurels. Mr. Russel, of Kilwhiss, in Scotland, states that he saw at at Springfield, in America, a very large show of Short Horn cattle, and he does not think that at the Royal Agricultural Show at Windsor, in 1851, the general stock was so universally good. The American, by importing such bulls as the "4th Duke of York," and such cows as those of the "Duchess" tribe, places himself at once in the same position for success as England was in 1810—when Charles Collins's magnificent bull "Comet" was almost the sole fountain, from whence have sprung the hundreds of fine animals which now graze in the valleys and uplands of this beautiful country. America acts wisely in selecting well formed animals of the "Duchess" tribe to found a race, for they possess intense vital force, and impress their own characteristics upon their offspring; as a proof of this, I may mention, that three years ago, prior to a sale at which, among many others, some alleged animals of the "Duchess" tribe were to be sold, I went into the field where the ticketed cows were feeding, and giving the catalogue, into which I had not looked, to a friend, I said: "Now, let me see whether I cannot pick out for you every heifer that is alleged to be descended from the '4th Duke of Oxford,' through a cow that is herself well bred;" and I did so without a single error. I mention the fact as an illustration of how distinctly qualities are handed down from generation to generation by special individuals.

But, gentlemen, valuable, unspeakably valuable, as is a long descent; much as I esteem and love a pedigree, yet I hold it to be the veriest folly to give high prices merely for a pedigree; to value an inferior animal merely because it has descended from fine race. Such folly will almost always end in disappointment. I have known heifers purchased at 60 guineas, ($300) which were not worth 20*l.* ($100) in any market in England; they were small, misshapen animals of low quality; they had narrow chests, hollow shoulders, flat sides, and thin flanks, but wherewithal a pedigree so long, that it bothered the printer to find "g, g, g, g's" enough and "r r r r's" enough to print the catalogue in which were detailed the great, great, great ancestors of these abortions. No lineage, however high, can compensate for such defects. One deformity, in a cow of strong vital force, may be impressed upon its offspring through many generations, just as the good qualities of an unpedigreed bull—a bull without a registered maternal grandfather, "Hubback"—have been handed down for nearly 80 years, and are seen in some of his progeny to this very hour. Some people are perfectly infatuated with the "Herd Book;" they are spell-bound by its records, and seem to disregard other circumstances, if we may accept their purchases as the tests of their opinions; but this of itself will not suffice to produce a first-class herd of cows, or sheep, or pigs. *Secure pedigree whenever you can,* but do not omit form, quality, size, and what, for want of a better term, I will call life-vigor, and by this I mean strength, activity, and a stately, lively carriage, and if to these you can join docility of temper so much the better.

I repeat, many animals imprint their own characteristics upon their offspring through many generations, and when you have a good animal of this kind it becomes priceless, and with care and proper management may be serviceable for many years. We deal with artificial forms; special and even accidental characteristics have been arrested in the individual, and been stamped upon its progeny; what we term our best-formed animals are wide departures from the primitive type, and we could secure for our successors, if not to ourselves, still wider deviations from existing forms, if such were deemed advisable. These facts, I think, prove how very particular we ought to be as to the qualities of the individual animals from which we rear stock. For practical purposes it is not enough that an animal should be pure bred. It should in itself be symmetrical, full-sized, handsome, of good "touch," and vigorous, if retained for breeding purposes. No pedigree, however high, can be an equivalent substitute for these qualities—in short, we desire *form with pedigree*; but pedigree without good form and without quality we hold to be a mockery, a delusion, and a snare.

Having secured a good calf, or young animal of any kind, it almost entirely depends upon the owner whether it shall be a stunted or a full-sized animal. *No after treatment can ever compensate for bad management in the early stages of the animal's growth.* If at any time food be stinted and warmth be withheld, or if, as sometimes happens, warmth is given but light is withheld, or if warmth be secured only by impure ventilation, mischief is done, and a check to growth takes place which is never fully recovered from. Light and proper warmth are essential elements of health. Exclude a young growing animal from light, keep him warm by means only of the heated carbonic acid gas which he has thrown off from his lungs, and by the ammoniacal gases which emanate from his evacuations, and you will plant the seeds of "scouring," "black-leg," and those other mysterious complaints which carry off calves suddenly and hopelessly. You may produce scrofula ("king's evil"), rickets, or consumption in an animal, by excluding it from light, giving improper food, and surrounding the creature with an impure atmosphere. See how a flower in a darkened room creeps towards the light from some stray sunbeam. See how grass loses its green hue when artificially excluded from the light—and animals require it in like manner for the healthy performance of the functions of life. You may retard, and in some cases arrest, those higher changes which certain creatures have to pass through to their full development, by simply excluding them from light; tadpoles, for instance, have been kept for months as tadpoles, without reaching the higher development of the frog, by keeping them in darkness—and the young calves which are pent up in early Spring in dark and ill-ventilated places, are prevented from attaining that full health and perfect development which under happier circumstances would be reached. If required for the butcher, the diseased blood—the blood deprived by darkness and an improper atmosphere of much of its coloring matter and its fibrine—may cause the veal to be whiter, but if the animal be destined for a useful life, then let in upon him the glorious sunshine; let him breathe the pure, the life-giving oxygen of the skies; surround him with wholesome warmth; give him good food at regular intervals, and then, oh! then, in his sparkling eye, his smooth soft coat, his elastic skin, his rounded form, his frisking motions, he will testify his gratitude, and in his growth proclaim that he has a master who has had wisdom enough to comprehend, and kindness enough to supply the conditions upon which health, and strength, and beauty, and fertility can be obtained.

Break the Calves and Colts.

"Train up a child in the way he should go, and when he is old he will not depart from it," is just as applicable to the bovine and the equine tribes, as to the genus homo. The truth of the trite adage that "it is hard to learn old dogs new tricks," is not illustrated by the canine species alone. Not long ago we asked one who was driving a docile pair of oxen, how early he broke them to the yoke. "Why" said the youth, "they were always broken." That answer gives the whole gist of the matter. It is no trouble, but on the contrary, fun for the boys at least, to train up calves and colts just in the way they should go, by beginning the work before they are three months old.

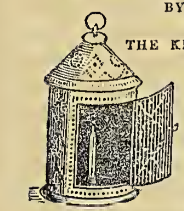
We protest against putting any animals, human or other, to severe labor before maturity of muscle is attained; but kind treatment, constant handling, halter breaking, yoking, and driving, are advantageously practiced with colts and calves of the tenderest age. One who has not tried it will be surprised at the ease with which young animals may be taught to obey. We have had colts not six months old that would come at the call of their names, kneel at the bidding, lift a fore-foot to the hand to be shaken when bidden a "good morning," lay the head upon one's breast when asked if they loved their master, lead by the halter as readily as an old horse, and submit to the mock saddle, to beating the hoof as if shoeing them, and so of other manipulations. And these colts never knew what it was to be "broken."

We have seen calves driven about singly, and side by side, yoked and unyoked, made to change places, and sent away from the driver and called back again by simple word of mouth. We have also seen them get down upon their knees, lift up any desired foot, etc., with the utmost readiness All this was accomplished by kind systematic treatment when growing up. A friend wo were just conversing with, tells us of the fine sport he used to have on moonlight evenings when a boy, with a regular steer team made up of nearly all the calves in the neighborhood. Fifteen to twenty pairs were sometimes brought together, fitted with rude light yokes, and the whole attached to a light sled, and driven along in great glee. It was difficult to say whether the calves or the boys enjoyed the sport the most. Such a team was far from presenting a mean appearance. And these exhibitions were of three-fold benefit. The boys were not only kept from mischief, but were learning useful lessons, and no little skill was developed in constructing miniature yokes and other tackling. The calves were being trained for useful docile working oxen. And further, the extra currying and other care in feeding which each boy was likely to give his own animals when thus to be taken out into "company," was not wholly thrown away

We have given these illustrations not to recommend such unusual training for general practice, but to indicate what may be done, and to impress the suggestions that a moderate degree of *early* training may be adopted by all, with decided advantage. How much better this course every way, than the usual method of allowing young animals to literally run wild until three or four years old, when they are headstrong, and require long, vigorous, and even hazardous coercion before they are thoroughly subdued.

Blinks from a Lantern.......XV.

BY DIOGENES REDIVIVUS.



THE KEY TO PROFITABLE FARMING.

In my researches, I often find this question put: "How shall the poor man make farming profitable?" It is easy enough to see how a man owning a large section of virgin soil, can transfer something of its fertility to his purse, and make money. If he have capital to work it, and a good market for wheat, he can make money rapidly by a few successive crops of this cereal. But this is not farming, strictly speaking, for nothing is done to husband the resources of the soil. It is simply an ignorant skimming of the soil,—a robbing of posterity—a work to which any vandal is adequate.

It is also easy to see how a man of capital, with a good farm, can keep up its fertility, and make money by the sale of a portion of its crops. But how the poor man with nothing but a poor farm and his hands, is to make a good farm, a good living, and at the same time save something for old age is not so readily perceived. It may reasonably be expected that my lantern should throw some light upon this subject.

It is of great service to the farmer, that he should cherish reasonable expectations of what he can accomplish in his business. The cultivation of the soil is unlike other occupations, in several respects. It does not afford the chances for sudden wealth which trade offers—or any speculative enterprise. But the *security* of its returns is a compensation for all other disadvantages. Labor, wisely directed, is more certain to be rewarded than in any other occupation; the farmer, then, should abandon the idea of sudden wealth. It is not among the probabilities of his position in life, and he should feel no disappointment when he labors years and finds that his bank stock is not increased, and his superfluous change is very small. If he have got a good living, and kept his farm improving in its productive capacity, without involving himself in debt, he ought to be satisfied.

It is not a reasonable expectation that a man can carry on a farm without some capital. This is required in other pursuits still more largely than in farming. If a man, therefore, have nothing but his hands to begin life with, he should be content to sell his labor to the highest bidder, until he have some capital to invest in the soil. In this way, he will all the while be increasing in skill, which is quite as available in this business, as either capital or labor. Too many, in their ignorance, set out in this business without counting the cost. They run in debt for the whole farm and stock, and enter upon a business requiring skill and labor, when they have nothing but labor to bestow. The amount of capital needed to begin with, depends much upon circumstances. Less of course is needed where land is cheap, than in the older States where it is dear. Much also depends upon the extent of the business with which one can content himself. The capital should be somewhat in proportion to the extent of the farm and the skill of the cultivator. A farmer of great experience, who knows just what to do with every dollar, can use a large capital to much better advantage than a beginner in the business.

A first principle in profitable farming is to cultivate only so many acres as you can make better. It may be your misfortune to own a large farm, and to be without any other capital. It is your ruin and the ruin of the land, to continue running over a large surface, and secure crops that barely pay the expenses of labor. It were good policy, in such a case, to sell half of the land to get capital to work the other half. If this cannot be done, seek to cultivate only so much as you can make remunerative. It is not improving land to plow it and take off a crop. It should have manure enough to raise seventy-five bushels of corn, sixty of oats, thirty of wheat, and three tons of hay to the acre, when it is laid down to grass. Crops less than these ought not to be considered *good* farming—that is, where the natural soil is not decidedly bad. Almost any of our exhausted soils, that now yield but twenty bushels of corn to the acre, or a ton of hay, require from fifty to seventy-five loads or half-cords of farmyard manure to give them a start, and put them upon a course of improvement. If a farmer has only manure enough for one or two acres, let him attempt to cultivate no more. As to the rest of the farm, let it take care of itself, until you have the means of improving it.

Another principle in profitable farming is to keep only so much stock as you can keep in a thriving condition. The profit of an animal, reared for his flesh, ceases when he stops growing. He should be well fed until he reaches maturity, and then be slaughtered or sold. The porkers will pay as long as you can make them gain a pound or two a day. Lean squealing hogs are as unprofitable as they are disgraceful. Many farmers starve their sheep, so that they are unable to bring forth healthy lambs; starve their cows, so that they come out in the Spring looking more like skeletons than milkers. It takes a whole season of good pasturage to retrieve the ill treatment of the winter. Every animal kept upon the farm should have all the food he can digest, and as a rule, the more he digests the more profitable he will be, whether you take your pay in labor or flesh. And in this item let it be remembered that good quarters for your animals, warm dry stalls, stables, and styes, will save twenty-five per cent and upwards in fodder.

Another sound maxim is, treat your vegetables as well as your animals, keep them thriving until harvest. Use all the labor you need to cultivate your crops thoroughly, and to harvest them seasonably. Oftentimes, a large part of the profits of a farm go to make up the losses of deficient or unseasonable labor. Corn is planted two weeks too late, and the frost cuts off ten bushels in the acre. It is not hoed late enough, a crop of weeds takes possession, and another ten bushels are lost. Many a farmer with two hundred acres, tries to get along with a hired man and a boy, when he has business enough for six able bodied men. As a rule, labor upon the farm pays as well as capital, if it be skillfully directed. With many, the chief cause of unprofitable farming is deficient labor.

Then, most important of all, is the saving of manures. Their waste is the besetting sin of our husbandry. Not one farmer in a hundred makes the best use of his means for increasing the stock of his fertilizers. The majority waste more than half of these riches of the farm. "Study to have a large dunghill" was the exhortation of Cato two thousand years ago, and no sounder maxim was ever laid down in agriculture. If twenty-five cords of good farm-yard manure from each well fed ox or cow is an attainable result, every one can easily estimate the waste in his own practice. The liquid and solid droppings of all domestic animals are the farmer's silver and gold, and should he as carefully watched as the contents of his purse. Save all the vegetable wastes of the farm, bog hay, straw, leaves, weeds, small brush, peat and muck, and work them into the compost heap with the animal manures. He who observes these maxims, holds the key to profitable farming, and in enriching his acres will enrich himself.

How to use Rough Fodder.

Every farm produces a large supply of coarse material, the straw of the grains, the stalks and buts of corn, and the hay from swamps and marshes. These all contain more or less nourishment when well cured, and are available for food. It is a common practice in many parts of the country, to fodder them out from the stack-yard upon the frozen ground, where half starved cattle are constrained to eat them, or perish. This is the poorest use they can be put to. Better use the whole for bedding and manure, than make them the means of tormenting brutes, with the pangs of hunger.

All this coarse material should be kept under cover, and run through a hay cutter before it is fed out. It should then be mixed with Indian meal, or some concentrated food. The most of it will then be eaten, and while the coarser portions give *bulk* to the food, the finer parts and the meal will furnish *nourishment*,—two essential qualities in the fodder of the ruminating animals. It will be better still, if the commingled mass can be steamed or boiled. This process softens the coarse, hard stalks and straw, and enables the animal to digest them more perfectly. The use of steamed food is increasing among those who have sufficient capital to carry on the business of farming. It enables one to work up all the rough fodder, and to pass it through the stomachs of thriving cattle. It gathers up the fragments so that nothing is lost.

If the steaming apparatus or a large boiling kettle, be not yet ready, and the meal is not to be had, it is a good plan to mix sliced roots with the coarse fodder cut up short. Turnips, beets, carrots, parsneps, and mangel wurtzels, are rapidly reduced to fine chips with a root cutter, and are highly relished by cattle. They ought to be used in connection with hay or straw. Animals will thrive much better upon this mixture, than upon either used separately.

In any one of these ways, rough fodder may be turned to good account, and all stabled animals be kept full fed from the close of the grazing season until Spring. This careful preservation of fodder will greatly increase the manure heap, and add to the riches of the farm. Stuff the animals, that they may stuff the soil.

A breeder of fowls says one of his shanghais when eating corn, takes one *peck* at a time.—*Ex.* That's nothing, Mr. Exchange; we have an old sow that, when eating swill, takes a *hogshead* full at a gulp.

Lean Calves make Mean Cattle.

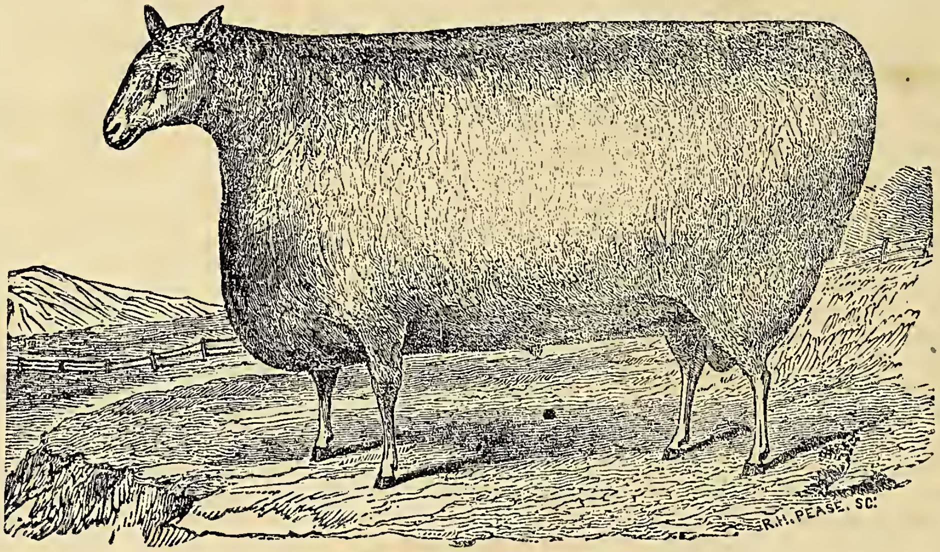
Calves and yearlings, at this season of the year, are often fed upon the coarsest fodder, and needlessly exposed to the weather. They are brought in late from the pasture, several weeks after they have ceased to thrive, and are kept upon poor fare, all through the Winter. The apology for this is, that the farm produces a certain amount of poor hay, which must be used up, and the young cattle eat it better than the older ones, and are therefore kept upon it. This is destructive of the best interests of the farmer, for it is all the while undermining the constitution of his stock, thus preventing their future thrifty growth.

It is highly important to remember that the constitution of a horse or cow is determined in the first three or four years of life. It is particularly liable to injury in the early stages of its growth, and if stunted there, it never attains a full development. The farmer lays the foundation of the future character of the animal at this early age, making the most of the good qualities it inherits from his parents, or aggravating the bad ones. He is as really a builder in the feeding of an animal, as the man who rears a house. The young animal wants good rich food, the best which the farm produces, particularly that which abounds in the raw material for making muscle and bone, that it may perfectly elaborate the osseous structure, and clothe it with flesh. If a farmer wants the best oxen, the best milkers, the fastest roadsters that can be made out of his stock, he must give them a fair chance in the first and second Winter.

It does not look reasonable that bog hay, and moldy, damaged corn stalks or hay, will make strong bones, or cover them well with muscle. Many a man has tried the experiment, and the result has been uniformly unsuccessful. The abused animals always come out in the Spring looking thin and cadaverous, every bristling hair and projecting bone uttering its remonstrance against the misguided owner. Even bulls that are to perpetuate the herd, are frequently kept in this half starved condition with the other young cattle, and are put to use before they are half grown. What can a man expect with such management of his stock, but miserable runts, that cumber rather than adorn his farm. Let the colts, calves, and yearlings have the best of hay, and the careful attention of the owner through the foddering season, if horses of good speed and bottom, good milkers, and strong oxen are wanted.—Bog hay should be held at a discount.

Look after the Breeding Animals.

The cows are dried off, and there is no more immediate profit from them. Some are so short sighted, as to stint their cows when they cease to give milk. They are often exposed to the weather at the stack yard, or if housed, are fed upon second rate fodder. This is miserable management, whether we look at the future profit from the cow or from her progeny. It should not be forgotten, that the cow at this season usually eats for more than one. Her value as a milker next Summer, depends upon her treatment during the Winter. She wants all the food she can digest, and good comfortable quarters. If she come out in good flesh, the fat pastures of June will be turned into milk and butter for the benefit of her owner. If she come out lean, it will take half the Summer to recover flesh, and to get into condition to give a full flow of milk. If the calf is to be raised for stock, it is still more important that the cow should be well fed. Its future good qualities will be very much affected by its fœtal life. Breeding sheep, swine, and all domestic animals, should have the owner's eye every day. Well fed dams will, ordinarily, produce strong, healthy offspring, repaying extra pains four-fold.



COTSWOLD SHEEP

What Kind of Sheep Have You?

In taking our usual round through the New-York Live Stock markets, last week, we were led for the hundredth time, and more strongly than ever, to note the great difference between the various breeds of sheep on sale—or rather the difference between some blooded sheep, and others with very little blood in their bodies, and what there was of it of very poor quality. In one pen, heavy fat wethers were selling readily at an average of about $10 each—some of the best as high as $12—while in the very next pen was a lot which went slowly at $2. We could but wish the breeders of these latter animals present, to see the $8 extra so readily paid for the superior formed animals, while their own were in little demand even at the low price named. The poor and good were of about the same age, and the difference in the cost of raising them, was undoubtedly in favor of those selling for the most money. It is a noteworthy fact that sheep of common breeds and poor blood, with long legs, large heads, and slab sides, often consume, without taking on fat or flesh, as much food or even more, than the well bred and well formed animals, which always keep fat. The first cost of getting this improved stock is about the only extra expense, and then they are a constant source of profit as well as of pleasure.

These thoughts are peculiarly appropriate now, as this is the season of year to provide breeding bucks. If a farmer has only common stock, let him resolve that their progeny shall be of a better grade, by introducing a well formed blooded male, even if it be attended with considerable additional expense. The particular breed to be chosen must depend upon circumstances. If raised chiefly for wool, a mixture of the Merino is desirable; but if producing mutton for market is had in view, the Southdown, Leicestershire, or Cotswold, are preferable, as these furnish a larger carcass, fine tender meat, and take on fat readily.

We present herewith an engraving, a sort of model, though this one is somewhat disproportionate, perhaps, in the rump. Not long since we saw a fat sheep sold in this city for $100! which was in form very nearly like our engraving—not quite so deep in the breast, nor so level along the belly. Let farmers compare this with the stock in their yards, and see if there is not room for improvement in their breeds of sheep. They will find large hams and shoulders far more profitable, than long necks and overgrown heads and horns. If near good meat markets, seek an admixture at least, of Cotswold, if not the pure bred, of which we give a specimen. If a little remote from market, but yet so situated that there is any profit in selling or using mutton, adopt the Southdowns, which yield fair wool and excellent meat. If wool be the only object, then bring in the Merino blood.—And, we would ask here, why are not more sheep raised in this country? Wool of all grades seldom fails to command a high price; and when to the value of the fleece we add the good meat yielded, there is no doubt of the profitableness of sheep. No other animal is kept with less care, and they come early to productive maturity. At one year old, the lamb is ready for shearing, and for slaughter. The general testimony from most parts of the country is: "We can not keep sheep on account of the dogs." Is this so? Are our farmers sacrificing millions of dollars a year that they might derive from sheep-raising, on account of the existence of an excess of worthless dogs? We believe this to be the case. There is much to be said on this topic, and our pages will be open to the subject of sheep culture during this year.

Cattle's Tongues—Curry-combs.

The tongue of a cow or ox is suggestive. It is armed with a compact bed of spines, very rough to the touch, and adapted to a variety of uses. With this pliable member, it draws grass between the teeth for cropping, and all other articles of food when necessary. It comes in play in reaching up into the limbs of trees for foliage or fruit, or in reaching over walls and fences after forbidden crops. The tongue is also used in disturbing the hair and skin on all parts of the body within reach, and the inaccessible parts of the head are curried by mutual accomodation. No sight is more common in a herd of cattle, than this reciprocal toilet of the tongue. Here is nature's hint for the use of the card and curry-comb. These tools are especially called for in Winter, when cattle are kept in stalls, with thei heads confined, so that they can not use their tongues upon their own skin.

It is said by old hostlers, that a good currying, brushing, and rubbing down once a day, is equal to a feed of oats for a horse. However this may be, there can be no doubt that it greatly promotes the comfort and health of horses and cattle. It removes all filth from the skin, which is apt to accumulate in stables, unless currying is attended to daily. The skin is constantly throwing off effete matter, which collects around the roots of the hair, and stops up the pores, unless it is in some way removed. The tongue does this partially, but the card and curry-comb do it still better. This office is performed for the horse quite regularly, because he is more frequently exhibited in the presence of his owner, and the cleanliness of the carriage, and of the clothes of the family, depend somewhat upon the condition of the skin of the horse. But the ox, the cow, and the young animals, are sadly neglected. It is not unfrequently, that a yoke of oxen will come out of the stable in the Spring, with a thick plaster of filth upon their hams, the accumulation of a whole Winter—a disgrace to humanity, and to the good husbandry of the owner.

All these animals manifest their pleasure at the use of the card and curry-comb upon their skins, and after a little practice, the young stock will come as regularly for their carding, as for their food. It is an excellent method to tame heifers that are to bear their first calves in the Spring. They become accustomed to the handling of man, and submit to the first milking without much resistance. It is equally good for steers that are soon to be brought under the yoke. They become so gentle under gentle treatment, that they are easily broken to the yoke, and make a more tractable team, than by the ordinary process. The card is a much better persuader, than the ox whip. This is excellent business for the boys, and they should be taught to keep the card moving.

Home-made Corn Brooms.

[Though the improved brushes, brooms, carpet-sweepers, etc., made of hog's bristles, are coming into more frequent and general use, still the days of broom-corn are not yet numbered, and will not be for some time to come. Broom-corn is easily grown, and, in the newer portions of the country especially, it is a matter of economy to produce enough for home use. Though as a general rule the regular manufacturer can make brooms on a large scale cheaper than it can be done by individuals, yet the cost of transportation, and the two or three profits to be paid before they reach the consumer, and the necessity of saving every possible penny when one has to struggle hard to come out square at the end of the year, make it a matter of economy to get up brooms, as well as other domestic utensils, on the farm. Making brooms is not a very difficult operation when it is understood, and with a little instruction almost any one can do it. Not long since we heard a 'Buckeye farmer' remark: "When my daughters want a new broom they just go to the shop and make one." Our Maine Contributor has prepared a description of his process with some illustrations, which we take pleasure in presenting below. There may be better methods, but this corresponds nearly with what we helped practice many years ago, when a boy on a Western farm, "way out in the woods," and we think the hints here given may be useful to many persons.—Ed.]

Supposing the reader has learned from your previous articles just how to raise the broom-corn and gather it, I will omit all on that topic, further than to say that broom-corn is grown just like common maize or Indian corn, and requires similar soil and cultivation. The seed should be planted thicker to avoid failures, and many prefer to put it in drills. When the seed begins to harden, the upper joint is broken over to prevent the head from breaking off the stalk too short. Before hard frosts the heads with about a foot of stalk are cut off and laid on the barn floor, or on rails or poles under cover to dry thoroughly.

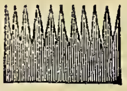


Fig. 1.

To clear off the seed and prepare the brush, a wooden comb may be made with a saw, on the end of a board, like fig. 1. The board may be nailed against a log or bench, or be cut short and secured in a work-bench vise, if one be at hand. Save the seed for horses or poultry, selecting first, enough good plump kernels for the next planting. Cut off the stems about six inches from the brush.

When ready to use, take as much as is needed, and set the stalk portions in water up to the brush, and leave to soak an hour or two. When softened, gather in the hands enough for a broom, with the largest and best stalks on the outside, in regular order. The good appearance of the perfected broom will depend upon the evenness of the brush and good arrangement of the outside layers. Next, fasten a strong small cord to the ceiling, with a loop for the foot in the lower end, or tie a stick in, upon which to place the foot. Wind this cord two or three times around the brush as shown in fig. 2. Grasp the brush firmly in both hands, and roll it round several times, increasing the pressure with the foot. [Instead of the foot we used a lever upon the lower end of the cord, one end placed under the work-bench, and the other held by a boy.—Ed.] The next operation is to wind on a strong twine for a space of 1½ or 2 inches. This is best done by rolling the pressing cord to the part next the brush, wind the twine on, and roll off the cord towards the end, following it with the twine. To make a neat knot at the end, double one end of the twine and lay it along the outside of the stalks as shown in fig. 3, letting the loose end lie out at the left. When the twine is all on, slip the right end through the loop, and draw the left end so as to bring the loop in under the coil of twine; then cut off the two ends close in to the coil. No knot will now be visible, as the lock is out of sight, and the ends are securely fastened.

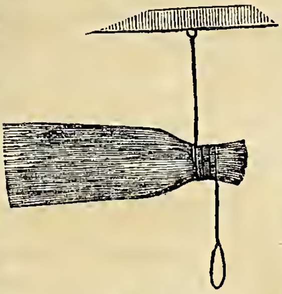


Fig. 2.

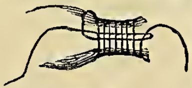


Fig. 3.

If a flat broom is to be made, which is desirable, press the brush part between two narrow boards, (fig. 4,) fastened near together at one end with a piece of leather nailed on. The other end of the boards may be held together with a string. Instead of these boards the brush may be put between two short boards and screwed into a vise. The sewing is next in order. For this, use a large needle of iron or steel, or one of strong wood will do, (fig. 5,) eight to twelve inches in length. At the point where you wish to fasten the brush portion, say three or four inches below the winding thread, wind a twine once, or better twice around, and tie it firmly, leaving enough of one end to sew with. Now sew through and through, letting the thread pass around the winding as shown in fig. 6. Point the needle forward in making each stitch, so as to have it come out on the opposite side a little further along each time. A second sewing may then be made further towards the lower end. Three sewings are sometimes made. Two will generally be enough, except where the brush is very long.

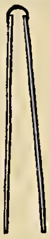


Fig. 4.

Fig. 5.

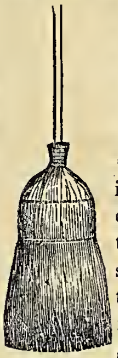


Fig. 6.

Sharpen the lower end of the handle, and drive it in exactly in the center, and fasten it with two small nails upon opposite sides, and the broom is complete. The lower ends of the brush may need clipping a little to make them even. With a little practice a very neat broom may thus be made. They may be made still more tasteful, though not stronger nor more durable, by using wire instead of twine, and by paring down the stalks, so as to make a smaller, neater shank.

How Hemp is Grown and Prepared for Market....II.

Breaking.—This is considered the most laborious part of growing hemp, only the strongest hands being engaged in it. The most appropriate season is in February and March, in the clear bright days following frosty nights. The process is very much like that of breaking flax, and it requires a similar state of the atmosphere. Nothing can be done to advantage in damp wet weather. On the morning of a clear day, with the wind north-west, the hemp is set out on the south side of a fence, or where it may have the full benefit of the wind and sunshine. This work is usually performed in the open air, and sometimes the breakers have a fire, which assists in drying the hemp, while it keeps them warm.

The instrument in common use for this purpose is the old fashioned hand-brake, a little heavier and longer than the flax-brake of the Northern States. It is a rude contrivance, about two-and-a-half feet high, and six or seven in length. It consists of two jaws, furnished with two slats in the upper, and three in the lower, interlocking when they are shut. The upper is made movable, and in the process of breaking is raised up and down by means of a peg fastened in the head or block at the front end. The workman takes his stand by the side of the brake, grasps a handful of the hemp with his left hand, and with his right raises the upper jaw of his instrument, and by repeated strokes upon the hemp, breaks up the woody fibre, which falls off in shives, or little chips, until the lint is left nearly clean. He assists the cleaning process from time to time by striking the hemp across the brake, or across a stake put up for the purpose.

Scutching.—This process is called swingling in New-England, and those who have seen that work in the age of home-spun, which many of our readers remember, have a very good idea of the scutching board, and knife or scutch of the hemp districts. The board is fastened in a perpendicular position in a foot-block, and slightly hollowed at the top. The laborer takes a handful of hemp, after breaking, and putting it across the top of the board, strikes it with the scutching knife, to disengage the shives. This is done until the lint is clean.

The usual day's work, or task, is 80 pounds, though much depends upon the state of the weather, and the character of the workman. Smart hands will frequently break twice this quantity in a day. The scutching is now generally done by the manufacturer. A day's work, as it comes from the brake, is done up in a bundle, and is then sent to market.

As may readily be inferred, this crop, with so many handlings—pulling, binding in bundles stacking, spreading for rotting, and gathering again, housing, breaking, and baling—comes to market in a great variety of conditions, very much affecting its value. It is almost impossible with the labor usually employed upon this crop, to produce an article of uniform excellence. Some is not rotted enough, some too much. Sometimes the breaking is not thoroughly done, and again it is imperfectly cleaned and carelessly handled. The price ranges from $3 to $8 the long cwt. (112 lbs). At the average price of five dollars, it pays rather better than tobacco or corn in localities distant from market.

EFFECT UPON THE SOIL.—Hemp exhausts the soil much less than many of the grain crops. The quantity of dressed lint from the acre varies from six hundred to a thousand pounds, according to the soil and the season. A dozen crops are sometimes taken from the same field, but this is bad husbandry. It is considered a cleansing crop, as it keeps down all weeds, and leaves the ground in fine condition for grain or grass. The pulling of the long roots disturbs the soil in much the same way as the cultivation of carrots and other tap roots, though not quite so deep.

THE HEMP MARKET—In our own country is quite large, ranking next after cotton among the textile crops. We import, some years, of hemp and its manufactures, to the amount of nearly ten millions of dollars. Besides this, we raise a crop worth about five millions more, which is mainly consumed in this country. If our government steadily pursued the policy of encouraging the consumption of home products and manufactures, there would be an inviting field of labor in the increased production of this crop—as the statistics show that we produce only about one-third of what is annually consumed in the country. With the finest soil for this crop in the world, and abundant capital and labor, there seems to be no good reason why the country should send ten millions abroad to pay for this article. *

Reports on Sorghum.

A correspondent of the Rural New-Yorker writes from Henry Co., Iowa: "I am quite satisfied that the new sugar cane is destined to be an institution in the Northwest, and that Iowa may be set down as one of the sugar growing states of the Union. There have been thousands of gallons of syrup made in this county, and next year the quantity will be multiplied many times. Sugar mills—wooden and iron—have been erected in every neighborhood of three or four farms, and have succeeded beyond expectation in making a very fair article of syrup. With all our imperfection of machinery and inexperience, 200 gallons per acre are considered by actual experiment but a moderate yield."

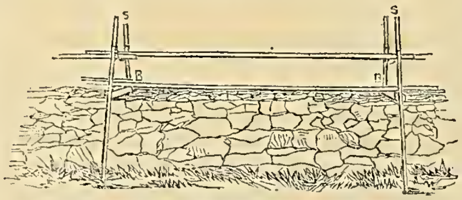
The Peoria (Ill.) Transcript states that within a circle of three miles in Peoria Co. 100 barrels of Sorghum syrup were manufactured by the farmers of that vicinity. A company has been formed, a five-roller mill erected, and one of Cook's evaporators (illustrated in the Dec. *Agriculturist*) purchased, which turns off 50 gallons of syrup per day—about the capacity of the mill. The juice is expressed for those who wish to do their own boiling, at two cents per gallon, or the syrup is returned to those furnishing the cane at eighteen cents per gallon. The mill and evaporator cost $200.

The Freeport (Ill.) Journal mentions a farmer in Stephenson county, who will have 100 barrels of Sorghum syrup to sell the present year.

The Davenport (Iowa) Gazette, in speaking of the manufactory in Henry Co., says: "The stalks are stripped of their leaves, and run through a two-roller mill, and the juice transferred to a shallow pan, with an evaporating surface of 40 square feet. The boiling is continued until five-sixths of the liquid has been evaporated, leaving the remaining one-sixth a Sorghum molasses of superior quality. Twenty-five gallons of syrup are turned off at one boiling, and four boilings can be made each day."

White Clover (*Trifolium repens.*).

This is a hardy plant, and it propagates itself wherever it has once become established on a favorite soil, since enough of its low growing heads escape the scythe and feeding of animals, to furnish seed for renewing the plants. It is too small to furnish meadow hay, but its densely matted, sweet, nutritious food, ever-growing and abundant, makes it most valuable for pasture; and its flowers yield the finest honey collected by bees. White clover is partial to clay lands where the surface has a fair supply of vegetable matter. It thrives best in the Northern and Middle States. We have heard little of it at the South. Have any of our readers in the uplands of Georgia, and in other southern regions had much experience with it?



Fence Stakes Fastened with Wire.

During the past season the writer has seen upon several farms in eastern New-York a method of securing stakes and rails upon the top of stone walls, which is much liked by those who have practiced it. The stone walls are first laid up, say three feet high, and then blocks of wood or stone, three or four inches thick, are laid across the top for the first or lower rails to rest upon, as seen at B, B. Stakes, *s*, are driven down in pairs close to the sides of the wall, slightly inclined inward. A stout iron wire is fastened on to each pair, by twisting the ends around the upper part of the stakes, about two feet from the top of the wall. The top rails are laid upon these wires, their ends lapping, as seen in the cut. The inclination of the stakes keeps the wire from slipping down, and the weight upon the wire draws the tops of the stakes together, enclosing the rails, so that they are not easily blown off, or thrown down by unruly cattle. The lower rails are kept in place also by the stakes. In the ordinary way, where the stakes are crossed over the top of the wall, and the rails lay in the fork thus made, there is a constant strain upon the bottom of the stakes, where they enter the ground, and in wet weather they are often thus *pried out*. By the method above described, the weight of the rails acts almost perpendicularly, thus holding the stakes firmly in place. The wire costs but a trifle, and is rapidly put on. It is cheaper and more convenient, more durable, and better than the wooden caps sometimes used. This is the testimony of a considerable number of farmers with whom we have conversed on the subject, who have had it in use several years.

Painting Buildings, etc.—Zinc Paint.

In reply to the queries of T. H. Wetherell, Jefferson County, New-York, and others, we answer, that, for surfaces exposed to the sun, October and November are the best months for painting such buildings and fences as are not located where they will be soiled by clouds of dust raised by the Autumn winds December, January, or February, are quite as good months, if it can be done so as to harden somewhat before a storm. If not done in the above months, then the earlier in Spring the better. Paint put on late in Spring or in Summer, and exposed to the hot sun, is more liable to blister, as well as to lose some of its oil by evaporation, and it does not harden so firmly as if put on in Autumn or Winter.

For a white coat, the "Zinc paint" is preferable to "white lead," because the former is not browned by sulphuretted hydrogen or other gases in the atmosphere which act upon lead and darken it. On this account the zinc is especially valuable for cellars, kitchens, privies, barns, and other out-buildings, and in houses where hard coal is used, as they are more subject to sulphuretted hydrogen. But we prefer it for all white surfaces as being whiter and probably quite as durable. There is an impression that zinc costs more than lead paint, because the price per pound is greater; but this is a mistake. Zinc white is lighter and goes much further in giving color and body than the same weight of lead. Several experienced painters inform us that when painting a job contracted to be done with white lead, they freely allow the employer to change to zinc without extra charge, as they find it no more expensive, and requiring no more labor to put on an equally good coat and color of zinc than when lead is used. Some say, however, that they can get a better body by using lead for the first, or priming coat, and then taking zinc for the remaining coats. We are just experimenting with a mixture of white lead and zinc for a first coat, but shall finish off with pure zinc.

A Shiftless Farmer.

Just take a glimpse at him. He throws his manure out under the eaves of his barn, and lets it lie in sun and air, leaching away half of its strength into the neighboring streams. He neglects, also, to make use of many other useful matters which might go to increase the compost-heap—such as bones, ashes, chip-dirt, contents of privy, forest-leaves, droppings of hen-roosts, muck, etc., etc. Yet at the same time, he buys stable manure at the neighboring town, and carts it home at considerable expense.

He allows noxious weeds to overrun his land—white-daisy, snap-dragon, burdock, yellow-dock, quack grass, Canada thistles, and many other vile roots too numerous to mention. The time was, when most of these could have been exterminated by a little labor. When they first appeared in small numbers, a very little work with a weeding-hoe or dock-extractor would have headed them off entirely. But now, having had full swing for several years, they laugh at the shiftless man's puny efforts and windy threats. But this is not the worst of the evil. The neighboring farmers are active, enterprising men, and have done their best to keep their land clear of foul roots, but the seeds blow over in clouds from the shiftless man's fields, and they are almost in despair. What can they do?

He keeps poor fences. When he sees a rail broken here, a board off there, or a post rotten and falling down beyond, he is very sorry, and hopes a good time will soon come for fence-mending; but he don't repair it at once. Bad becomes worse; hungry cattle leap the tottering fence, and down it all comes: wheat fields, and corn fields, and hay fields are trampled down; the farmer suffers loss, and, very likely he and his neighbors are soon having a delightful law-suit.

These are only a few broad lines of our portrait: the likeness will probably be detected without any further touches of the brush.

For the American Agriculturist.

Tim Bunker on giving Land a Start.

Mr. Editor.—"What are ye gwine to du with that are bag of Scotch Snuff?" asked Jake Frink, one morning as he looked at a lot of Peruvian No. 1, just landed at my barn door.

"Who has a better right to have a quilting than Mrs. Bunker, and to entertain the old ladies with a pinch of the Scotch dust?" I asked by way of rejoinder, and to stimulate Jake's curiosity, which was already wide awake.

"I thought snuff allers come in bladders" suggested Seth Twigs, as he blew out a column of smoke, that would have done credit to a locomotive.

"How du ye know but what it is a whale's bladder!" inquired Tucker, who had been to sea, and was anxious to show off his nautical knowledge, to Mr. Twiggs.

"That's guanner ye fools" remarked uncle Jotham Sparrowgrass, with a very emphatic blow of his cane upon the ground. "Haven't ye never seen any guanner? I've seen it a dozen year ago, over on the island—Judge Randall tried it time and agin.—Never could make much out of it. He got one or tu decent crops, and then the land fell off, worse than ever. The judge said it was a great humbug. Guess he's right."

"Ye aint a gwine to put that on tu the land, be ye Squire Bunker?" inquired Jake with an astonished look.

"I shouldn't wonder if I did."

This conversation with my neighbors, two years ago, shows the general impression about guano in any community, when it is first introduced. I had got it to try an experiment on some poor land, that lay off a couple of miles from my house. I suppose a man ought to apologize for owning land so far from home, for it is certainly very bad husbandry. The expense of cultivating it is nearly double that of a home lot, and manuring with stable dung at that distance is out of the question. The fact is, the land belongs to Mrs. Bunker, and, as it came from her father, she never felt like selling it. It has been used for pasture ever since I can remember. For the last ten years I have not been very particular about pasturing it, for there was not much grass there to be eaten. It was miserable old plain land, and had once been a light sandy loam, before the loam was carried off in crops. It bore five-fingers and moss pretty well, was fair for pennyroyal, and famous for mulleins and sweet fern. The sheep had worn little paths around among these brush, and if sheep have any virtue to restore exhausted land, that field never found it out. I suppose all the vegetable matter that grew upon an acre, if it could have been gathered, would not have weighed two hundred pounds. It used to be said of it, that it was too poor to bear worms and insects, so that skunks had to starve or emigrate.

We have a great deal of such land in all the old States, thoroughly worn out, and not paying the interest on three dollars an acre, to their present owners. They are generally farmers in moderate circumstances, and have no spare capital to give such land a start, and it lies idle and worthless. I thought it was worth trying to give this out-lot a chance to do a little better by itself, and its owner. My plan was to turn in green crops, a process in husbandry, that no body practices in this neighborhood. I had read of it in my *Agriculturist*, and thought it was just the thing for lots too far off from the barn to be manured from the stable. The trouble was to get the green crop to turn under.

I thought the guano would probably start rye, and with this I could make a beginning. I plowed up five acres two years ago in October, and put on five bags of guano, or about one hundred and fifty pounds to the acre. The rye came up well, and looked a remarkably dark green, and by the time snow fell, the ground was well covered with a thick mat of rye. That rye made a good deal of talk, and even on Sunday it used to be discussed between meetings, when folks ought to have been thinking on other matters. It passed the Winter well, got a good start in the Spring, and by the middle of May, the heads began to appear. It stood thick, and was thought to be one of the best looking pieces of rye in town. It went against the grain amazingly to turn it under, for according to the look, I should have had fifteen bushels to the acre.

About the middle of June, John and I went into it, with two teams, to plow it under; for I had made my plan, and was not to be turned aside by the talk of my neighbors. Tucker and Jones said it was a great shame to spoil such a field of grain, and even Mr. Spooner remarked, that making manure of bread stuff, did not seem to be very good economy. Now, you see, I did not care so much what George Washington Tucker and Benjamin Franklin Jones said, but I did not like to be undervalued by the minister. So said I to Mr. Spooner: "A thing always looks homely until it's finished; and you just wait till I get through with this field, before you make up your mind."

The rye was plowed under, and the ground turned up about two inches deeper than ever before. In about a fortnight I sowed buckwheat, harrowing it in with about the same quantity of guano, that I had used in the rye. The buckwheat came up and grew more rankly than any thing I ever saw before. All the neighbors were astonished at the monstrous growth, and most astonished when I brought out the teams, the last of August, to turn it under. They said Tim Bunker must be crazy to make manure of the heaviest crop of buckwheat in town. But the buckwheat went under notwithstanding. The last of September, I sowed with rye again, and as I had put two green crops under the sod, I thought the land had got start enough to take care of itself. I sowed with the rye, clover and herdsgrass seed, calculating that these would take the ground, when the rye came off. Last July I harvested from that five acre field, one hundred and twenty-five bushels of rye worth as many dollars. They have got to making paper out of the straw, so that I got ten dollars a tun for that or about seventy-five dollars.

Now, every man who is used to ciphering can tell whether the operation paid or not. The crop, I consider worth two hundred dollars, to say nothing of the fine catch of grass, which now promises, at least a tun and a half of hay to the acre. The cost of the manure was about forty-five dollars. The labor of plowing, sowing, harvesting, and the grass seed would, perhaps, swell the cost of the improvement to one hundred and fifty dollars This leaves a handsome sum on the right side of the balance sheet, and the land in much better condition. The old plain would have been well sold at five dollars an acre, for it did not pay the interest on half that sum. I should not want to sell now at ten dollars an acre. The experiment has worked much better than I thought it would.

Now, I think we have here a hint as to the economical way of giving land a start. If it lies near the barn, where manure can be carted cheaply, the stable manure is the best renovator. If it lies at a distance it can be done with Peruvian No. 1, and green crops, and it is much better to do it with this than to have it lie idle. Mrs. Bunker is as much pleased with the result as any body for she says "it has always distressed her to have any thing belonging to the Bunker family lying idle." Yours to command,

Timothy Bunker, Esq.,

Hookertown, Dec. 10, 1859.

Nebraska Correspondence—Insects on Apple Trees.

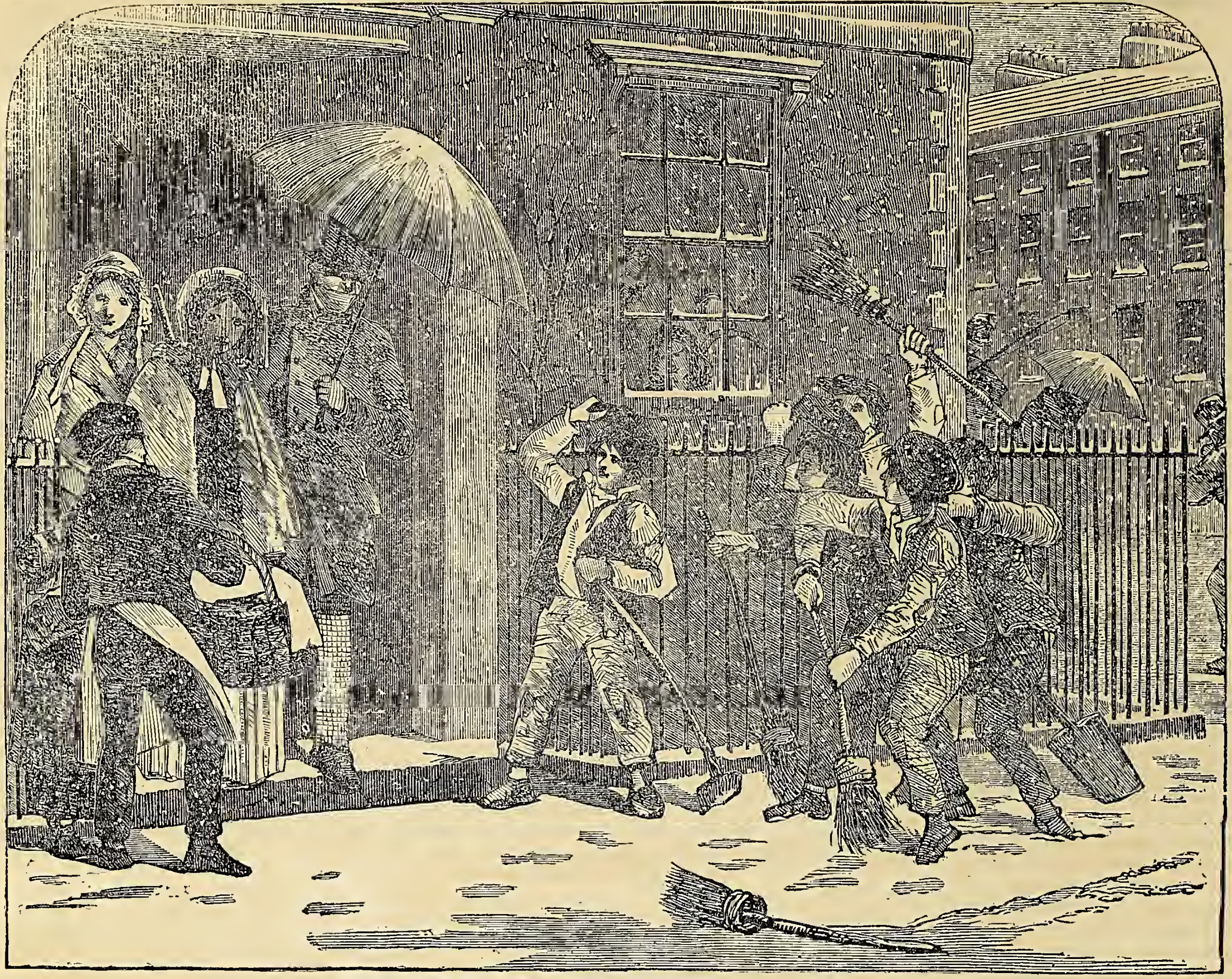
To the Editor of the American Agriculturist:

Crops in Nebraska have been good, except potatoes, which were light. We had the first damaging frost about Sept. 20, but corn was mostly ripe. The probability is that we shall have food enough of our own production, which has not been the case previously since the settlement of this Territory....I send you enclosed some samples of flies with which my trees were covered in September, and wish to know whether they are the "borers"—at all events they bore holes an inch in depth in my trees, commencing generally in the forks at the intersection of small branches. I have taken from one small tree as many as forty of the nests enclosing worms. I also find upon the trees many of a species of spider. Whether they destroy the insects referred to, or are in pursuit of other prey, I can not tell. My trees are still thrifty, but I fear they will be killed by the boring operation.

Douglas Co., Nebraska. E. P. BREWSTER.

Remarks.—The flies sent, were too much crushed in the letter to be examined well. They appear to be what are called the "harvest flies," (*cicadas*) which are sometimes quite destructive to apple and other trees by boring into the branches. The real borer (*saperda bivittata*) lays its eggs upon the bark, usually near the root, and the worms hatched out, begin to bore inward almost as soon as hatched. We know of no means of destroying the cicada, as they are scattered through the entire branches, and any offensive wash or powder would be difficult of application. They are usually of short duration. Then most destructive enemies are flocks of birds.—Ed.]

A person passing through the country, observed the following notice on a board: "Horses taken in to grass. Long tails, three shillings and sixpence; short tails, two shillings." The owner of the land being asked the reason for the difference of the price, answered: "You see, the long tails can brush away the flies; but the short tails are so tormented by them, that they can hardly eat at all."



WINTER IN THE CITY—DRAWN BY FOSTER.
(Engraved for the American Agriculturist.)

A striking contrast to the "Winter Scene in the Country," given in the *Agriculturist* last month, is the above spirited engraving, which is presented not only on account of its intrinsic merit as a pleasing artistic sketch, but also as suggestive of the difference between city and country life. We have here the massive, costly brown stone and brick dwellings, imposing without, and luxurious within, possessing apparently all that can add to comfort or gratify taste. The imagination pictures the inmates as enjoying fashionable ease, with an abundance of servants in waiting to anticipate their wants; their table loaded with all the delicacies afforded by a city market; the drudgery of the kitchen, and the monotonous housework all performed by hired domestics, while the lordly owners have only to eat, drink, and be merry. The outside observer sees nothing of the care and anxiety, of the strain of mind, wear of conscience, the vexatious details of business "down town," undergone to keep up the show, or reality, of wealth and comfort "up town."

The bright side of the picture only is contemplated by the multitudes, who, impatient of the slow gains of agricultural industry, live in constant envy of their supposed more fortunate acquaintances acquiring sudden wealth in large towns. It is this false coloring thrown around city life, that allures multitudes of young men from the so-called humbler labors of the country, to enter the crowded struggle for the golden prizes promised by a mercantile or professional life. The attractions of fashion, and the supposed pleasure attending such a life, have captivated the heart of many a fair maiden, leading her to slight the attentions of her manly though rustic admirers for the more showy qualities of a city gallant.

But the darker shades of the reality are here also depicted. The crowd of tattered boys, their faces sharpened by poverty, are clamoring for the job of cleaning away the snow from before the rich man's door. With them, as with thousands of others in every city, this is a part of their battle for life. Upon the securing of some such chance job, depends their dinner and lodging. The snow-storm is to them a harvest, but even its scanty return is contended for by an eager crowd. Desolate homes, neglectful or cruel parents or guardians, cold, hunger, and wretchedness, are their portion. How they live, they only know, few others care to know. Misery is too common a sight in the city to attract more than passing attention. The assertion may be startling, but we believe it to be true, that of those who remove from the country, ten descend to absolute poverty for every one that acquires a competence, while not five in a hundred ever become rich. This crowd of boys jostling each other, is a fit representation of what is here going on continually in almost every calling. *One* will succeed, the rest must fail. There ought to be today an exodus from New-York of twenty thousand, or many more, who are suffering privations unknown to the humblest residents of the rural districts. When the bitterness of the winter storm makes farm duties unpleasant, and thoughts of "easy times" in the city are active, or when in castle building by the fireside there is presented the temptation of the elegant mansion and its surroundings, let the picture of the street-sweepers also tell its story and be heeded.

Store Fuel for Summer Now.

No labor pays better at this season, than cutting wood for the Summer fire. Every farmer should seek to have a year's stock of wood on hand It is a well ascertained fact that the dryer you can make wood the more heat you get from it, for warming the house. It uses up a certain portion of the fuel to drive off the moisture. Three cords of well seasoned fuel will go further than four cords of green. It is economy then of fuel, and of time, to keep a stock always on hand.

In the Winter when the swamps are frozen, many of the wood lots are accessible, that can not be approached in Summer. In the season of crops, it will be found exceedingly inconvenient to quit mowing or hoeing, to draw a load of green wood to the door. It will be likely to make scolding in-doors, and without. A good farmer is known by the aspect of his wood pile, and wood house. The latter should be stuffed to its utmost capacity, while the snow makes hauling easy, and the season of comparative leisure lasts

How about that Spring Seed?

Notwithstanding the fact that we think our neighbors a little better than can be found any where else, we now and then see some things even among them, worth telling of, just for illustration. Here is one, in which the actor was a Mr. ———, whom we will call James Careless (we don't mean you Mr. Smith, nor you Mr. Brown, nor you Mr. Johnson, nor you Mr. A, D, M, nor Mr. P, but the other man). Last Spring Mr. C. prepared a piece of good ground for oats, and when all was ready he went to the barn for the seed which had been put away in bin No. 3. On raising the lid there was only a quart or two of oats there. An investigation showed that his man Michael had fed them out early in the Winter to the horses, instead of those in bin No. 4, which were filled with thistle and other foul seeds, and were of inferior quality, weighing only 25 lbs. to the bushel. He hitched up a horse and drove to a dozen neighbors to try to buy some decent seed, but it was late, and none of them had a surplus. After losing half a day in fruitless search, he went back and sowed the poor oats in bin No. 4. The result was, a light yield of poor grain, eight or ten bushels less per acre than his neighbor's crop just over the fence, and worth in market five cents per bushel less.

Later in the Spring, neighbor C., got his corn land ready and went to bin No. 6, where the fall before he had stored five barrels of seed corn, selected at husking time. He found half of it gone—shelled out by Michael during the Winter, for a grist to the mill—and what remained was in part moldy, and a part had the chits eaten out by mice and rats. Failing again to get good seed from his neighbors, he picked out the ears the least moldy, and made up the balance from a poor lot of nubbins kept for grinding up with the cobs for horse feed. The result was that only about half of it came up, and after planting some of the ground twice and thrice over, he harvested about half a crop of unsound corn, part of it frost-bitten. His neighbor had a full yield of splendid corn on the same kind of ground, similarly manured, and treated every way like his own, except in the kind of seed planted.

Mr. C. intended to raise his own beet, carrot, parsnep, cabbage, and onion seed, but when he went to the cellar for the roots to plant out last April, Bridget had already, contrary to order it is true, cooked all the best specimens. He put out a few of such as were left, but they made a sorry appearance, and next Spring he must buy seed or plant that of inferior quality.

The above are facts we can vouch for, and not the worst ones we could tell. You, reader, have probably known similar instances. Of course *you* never had any such experience. But while you think of it, would it not be worth while to look over your oats, and your corn, and your barley, and your roots, and see if they are all right now; and then keep an eye upon them from this time onward? Overhaul those barrels or bins of corn now and then, and see if there is not in the bottom a nest containing half a dozen young rats or mice. Look out for Michael, that he does not show partiality for the horses and give them the best oats—all by mistake. See if a few of the best roots in the cellar are put away in a box of earth by themselves where Bridget can't get at them by mistake.

To say nothing of the profits, there's no pleasure in plowing and planting a field of corn, and nursing it all Summer, and then to get but half a crop, just for the lack of a little better seed. Well, now, not next week; to-day, not tomorrow, is just the time to look after the supply of seed you will want next Spring.

The Kitchen Garden.

A good garden for raising vegetables and small fruits, is one of the most important appendages to a house. Indeed, a house in the country is not a *home* without it. It greatly promotes the comfort and health of one's family. Well says quaint Dr. Deane, "I consider the kitchen garden of very considerable importance, as pot-herbs, salads, and roots of various kinds are useful in house-keeping. Having a plenty of them at hand, a family will not be so likely to run into the error which is too common in this country, of eating flesh in too great a proportion for health. Farmers as well as others, should have kitchen gardens; and they need not grudge the labor of tending them, which may be done at odd intervals of time, that would otherwise chance to be consumed in needless loitering."

The position of such a garden is a matter of considerable consequence. Probably the best aspect is a southern inclination; next to this a south-western, or south-eastern; and poorest of all a northern. It should, of course, be nigh the rear of the house, so as to be easy of access from the kitchen; and as our old author writes, "not far away, lest being too much out of sight, it should be out of mind, and the necessary culture of it too much neglected."

A garden should be well fenced. For protection against thieves, nothing is better than a good thorn hedge, the thorn-locust being the most formidable. But for shelter from cold north-west winds, a high board fence or wall is better. This protection is very important where one wishes to raise early vegetables and tender fruits. It breaks off severe blasts, and gives a warm and summery air to the garden quite early in the Spring. Some persons white-wash their fences or walls, supposing that this makes them warmer. It may cause them to reflect the sunlight more powerfully, but it also makes them part with their heat faster.

The selection of a suitable soil is also a matter of great importance. By all means, avoid a low, wet piece of ground; for though the brightest sun may shine upon it, and though you may heap the richest manures upon its surface, it will yet be unsuitable for a garden. Draining may help it, but can scarcely make it as warm and generous as one that is naturally dry. A light, mellow, turfy loam, neither very sandy, nor yet of a stiff clayey texture, is the quality most to be desired. It should be said, however, that skillful cultivation can modify an unfavorable soil much, making it lighter or heavier as it may need.

To prepare the ground for planting, it should be sub-soiled or trenched. If trenched, let it not be done in the thoughtless way sometimes practiced of throwing up the bottom earth, and burying the rich surface soil beneath it. In old and over-cropped gardens, it may answer to bring up a little of the lower soil annually, but as a general rule, it should be left at the bottom. The right way of trenching is this: Begin on one side of your patch by digging a trench two feet wide and one spade deep, carrying off the dirt to the further side of the patch. Then go through this trench again, simply breaking up the subsoil to the depth of the spade, *but not throwing it out.* Now, fill up this trench with the good surface soil taken from the next portion to be trenched, then dig the bottom of the second trench and go on as before. When the whole plot is trenched over in this way, the soil taken off from the first trench will fill up the last, and the work is then done. If the soil is poor, a coat of manure should be worked in as the trenching proceeds. If it is stiff and cold, give it a dressing of old leaves, sand, lime, or peat, or anything calculated to render it porous and friable. If too light, add a coating of ashes, clay, etc., to be thoroughly mixed with it.

The shape of a garden is not a matter of great importance, though the nearer it approaches to a square or parallelogram, the better. The internal arrangement is of more consequence. The quite common plan in most good gardens, is substantially this: Lay off a border from four to six feet wide, all around the outer side of the plot. Devote this principally to vines and low shrubs. On the north side plant grapes, that they may have the full benefit of the sun. On the west set raspberries and blackberries. On the east put quinces and a few dwarf pears. On the south set currants and gooseberries of the various kinds which being of low growth will not materially shade the garden. A walk in front of this whole border may be from two to five feet wide, according to the size of the garden. So too, if space permit, a walk may be laid off through the middle of the garden, with a border on each side for dwarf pears or other small fruits. Grapes trained to poles may occupy a part of this border, if they are so managed as not to shade the other portions of the garden. If, for example, this middle walk runs east and west, the south border might contain grapes, because they would cast their shadow only across the walk; but the north border should not.

The remainder of the space may be laid off in squares for melons, squashes, cucumhers, cabbages, peas, and the like; or into beds for beets onions, and other vegetables.

Tomatoes in Pots.

A correspondent of the Gardeners' Chronicle (Eng.), strongly recommends the growing of tomatoes wholly in pots, especially by those who raise only a limited supply of a dozen or two plants for home use. He also thinks market gardeners, and those living in cities would find this mode valuable. The pot plants are entirely under control, and require almost no attention. He says: I have not planted out tomatoes for the last five years, but have had instead good crops from plants in pots, with no trouble in training, or stopping, and no failure as to production or ripening. I sow the seed in a No. 60 pot at the end of February. The plants are kept starving under glass till the middle of April, then shifted into thumbs, and put on the potting bench for a week. They are then packed together under a warm fence, and when they want it are shifted into 60's and allowed to get quite pot-bound. Another shift into 6-inch pots starts them into bloom at less than a foot high, and their further growth entirely depends on their amount of root-room. If left alone and allowed to root through their pots, they swell the fruit well and make no more growth, and every plant bears from half-a-dozen to nine good fruit which are ripe by the end of September. To swell them off, give liquid manure once a week and allow no succession of blooms. Any that are not quite ripe when sun heat begins to fail may be put under glass for a week; or if of good size, cut off the fruit with a good length of stem and hang them in a warm room and they soon ripen.

Remark.—The above plan may frequently be practiced here, but is better adapted to England as a general thing. In most places here we have dryer atmosphere and more sunshine to mature the fruit in the open ground. American cultivators would hardly be satisfied with a yield of only six to nine fruit on a single plant.

Notes upon Garden Beans.

We planted May 7th several rows of three kinds of early beans, side by side. They were put thickly in drills, and thinned out from time to time, as they became too crowded in the rows. Manured in the hill with bone saw-dust. The following notes were made.

Early Mohawk Dwarf Beans.—Ready to cook July 4th ; a large yield of pods, with little string, and very good. Continued bearing several days.

Early Valentine Dwarf Beans.—Ready to cook July 9th. Yielded well. Pods long and nearly round, with no string. Quality good.

Early China Dwarf Beans.—Ready to cook July 11th. Yielded well. Little string on the pods ; very tender, and cooking quality good.

Early Snap Dwarf Beans.—Ready to cook July 15th. From some unknown cause the pods had frequent black spots upon them. But for these spots they were quite as good as the Early China, both in yield and quality.

Lima Beans.—These were very successful. They were planted thickly on the tops of ridges, as early as May 4th ; came up quickly ; were thinned out as needed, and trained up on twine fastened upon a frame, 8 feet high, as described on page 166 of last volume (June No.) We began to cook them July 20, and the two rows, each 25 feet long, furnished an abundant supply for family use, for drying green, and near two bushels of unshelled ripe pods. The vines were kept shortened in at the top of the frames. We can strongly recommend the mode of culture, which was described, as above referred to.

Notes upon Garden Peas.

The following notes are taken from our garden memorandum book. The soil is a fair loam, not very rich, and during the last season—our first of cultivating it—no manure was added, except a little fine bone dust (bone saw-dust), intimately mixed with four times its bulk of dry loam, and put into the drill with the seed.

Daniel O'Rourke Pea.—Sown May 5th. First mess picked June 20th. Averaged about 2½ feet high ; yielded well. Kernel small, of fair cooking quality. Chiefly valuable for its very early maturity. Crop ripe and gathered, and ground resown July 5th. Second crop fair.

Champion of England Pea.—Sown May 5th. Cooked first, July 15th. Averaged 5 feet high ; well podded, and well filled. Kernel large, and quality very good. One of the best peas for a general garden crop.

Napoleon Pea (new).—Planted May 5th. First cooked July 16th. Averaged 3½ feet high ; well podded ; averaged 4 peas in the pod, of large size ; quality very good. Not quite so productive as the Champion of England, but more convenient for bushing.

Eugenie Pea, (new).—Planted May 5th. Cooked first on July 19th. Averaged 3½ feet high ; well podded ; 3 and 4 peas in a pod, sometimes 5, but not quite averaging 4. Quality very good. The peas were of large size ; cracked open somewhat in the pod.

Champion of Scotland Pea, (new).—Planted May 5th. Cooked first on July 23d. Averaged 6 feet high. Not very full of pods when picking commenced, but had many blossoms which yielded afterwards. Kernel large, and of good flavor. A good garden pea, but the hight of the vines (haulm) an objection.

"*Strawberry Pea.*"—Under this name we received a package of small peas last Spring. Planted May 8th. Ripe and pulled July 8th, and second crop planted and gathered. Averaged only about 6 inches high, very full of pods. They are only of moderately good quality. May be planted thickly in drills only 12 to 15 inches apart, and of course require no brush. We think they will yield quite as much, on the same space, as the larger kinds, and may perhaps prove valuable an account of their early maturity, and requiring no bushing. We have before seen peas called by the same name, but these appeared to be superior, both in yield and quality—due perhaps to the soil and season. We shall try them further.

Killing Strawberries with Kindness.

To the Editor of the American Agriculturist :

I little expected to find anything in mid-winter in your paper to assist me with my little farm of "four acres," but you have saved my choice strawberry bed : I was "killing them with kindness." Wishing to do something extra for them, and sawdust being the most accessible, I spread it on liberally. Had I covered them with dry sawdust the case would not have been so bad. A portion had been spread under the horses as litter and to soak up the liquids, and thinking this more valuable on that account I literally buried the plants with it, and should have left them so, but for your timely warning in the December *Agriculturist.* After reading about the danger of smothering the plants, I examined my bed, and found a portion of them already as black as my hat. A timely removal of the heated mulch will probably save them. On that portion of the bed where dry dust was used, the plants are all right.

S. E. GRUMAN.

Fairfield Co., Conn.

"Grafts" (cions) may be cut Now.

Cions or grafts of apple and other fruit trees may be cut at any time after the fall of the leaf in Autumn, until they are wanted for use in the Spring. In practice, it is found that early cut grafts do better than those taken off at the grafting season. We advise those who have trees to graft in the Spring to secure their cions now.

On any mild day when the twigs are not frozen, cut off only the last season's growth. Be careful to select from trees of *known* varieties. Much confusion and disappointment, not to say vexation, has resulted from mistakes in cutting grafts, which, after three years' nursing, have turned out to be common fruit. Not only should great care be exercised in selecting the right kinds, but they should be kept separate and plainly marked as soon as cut. Arrange the buts evenly, and tie in handful bunches, using two stout strings, one near each end. Write the name plainly upon a good label and attach it with wire to each bundle. Set these upon end in a wooden box in the cellar, and sift in moist sand, or cover with damp moss. They will keep very well when buried in a dry soil in the garden, but it is important that no water stand upon the ground. When thus buried, either in the cellar or in open ground, it is better to previously wrap the bundles in old newspapers to keep them clean and free from grit, so that the knife will not be dulled in fitting them for setting.

Grafts can be sent long distances by mail or express when properly prepared and packed. They are best secured by coating the cut ends with sealing wax, grafting cement, or gum shellac dissolved in alcohol, and wrapping them in oiled silk. The only requisite is to keep the sap or moisture they now contain from evaporating. When grafts are received in a shriveled condition, bury them at once in earth and they will frequently recover their plumpness and be suitable for use. They should not be put into water as has sometimes been recommended.

What Varieties of Apples to Plant.

Mr. A. Skein, of Montgomery Co., Pa., alluding to our November article where it was advised to plant only a few varieties of apples, asks what sorts, and where we would buy them. We could reply better if we knew whether the fruit was for market or for home use. If for market, Winter fruit would be desirable. The Baldwin and R. I. Greening are generally good, while in almost every locality there are one or two sorts which succeed better than others, and for which a market is easily found. We can not advise you where to buy. There should be in your vicinity one or more good, *reliable* nurserymen. We buy of our neighbors, Parsons & Co., because we know them to be entirely trustworthy, and it is convenient to get them there. The cards of other good nurserymen will be found in our advertising columns at the appropriate season.

Barren Grape Vines.

The inquiry is often made, why certain grape-vines bear no fruit. They make a great show of blossoms at the proper time, but bring forth no grapes. We are asked whether some new style of pruning or training, some appropriate manure, or other treatment, will not bring such vines into a bearing state. To all of which we briefly reply :

If the vines in question blossom and *set their fruit*, but fail to perfect and ripen it, the trouble is, probably, in an unwholesome soil, bad position, or overcrowded branches, etc.

But if they flower and do *not* set their fruit, (i. e. if the fruit does not form at all,) the defect is in the blossoms, and it is a radical defect. They have not both stamens and pistils, and therefore cannot of themselves form fruit. It is just so with many kinds of strawberries. If the barren grape-vines are lacking only in stamens, they can be fertilized by bringing the pollen by hand from other fruitful vines, and applying it to the pistils. But if they have stamens and not pistils, the case is beyond remedy. The vines should be plucked up at once, to make room for others of a perfect organization, or they should be grafted in the root.

Origin of the Delaware Grape.

To the Editor of the American Agriculturist

In your article about the Delaware Grape in the last No. of the *Agriculturist*, you say, "we can not tell the history of its origin and no one can, with any certainty." Now, I think I can. Living in the vicinity of Frenchtown, I have had a good opportunity of learning its history. We have two kinds of grapes growing in our section of the country that resemble each other very much. I have two large vines growing in my garden, which are poor bearers, and which I always thought were the true Delawares. I did not find out my mistake until this Fall. I have since felt a great interest in learning the history of the Delaware Grape, and have visited a great number of old vines, some between thirty and fifty years old. In every instance I could trace them back no further than to Mr. Prevost's at Frenchtown, N. J. Mr. Prevost was a French gentleman of wealth, and came to this country some seventy years ago. He owned an estate of about 600 acres, with all of Frenchtown. He not only cultivated the vine but also some of the most delicious pears; some of the old trees are standing yet, but the railroad has destroyed many of them. I think we might as well call them native too. The Prevost family that I conversed with, could not tell to a certainty about the grape, but were certain that it was not a native grape. I was speaking the other day with the widow of the late Dr. Holcomb, living in the neighborhood of Frenchtown. Mr. Holcomb and Mr. Prevost were intimate friends. Mr. Prevost told them that he got it from Burgundi. Mrs. Holcomb has two large vines growing in her garden; she told me that she often had to laugh at her husband as they walked in their garden trying to pronounce Burgundi, as Mr. Prevost did. The Delaware I think is as hardy as any grape we have. In some neighborhoods it does not mildew any, in others but very little. Our Germans say it is the best grape they have ever eaten in America. The best vines I visited were grafted on wild vines.

Bucks Co., Pa. CHARLES B. OTT.

Mr. David Conyngham, of Lancaster County, Pa., writes on the same subject, that he has just been informed by Mrs. A. K. Witmer, that Mr. Prevost brought the first Delaware Grape vine to this country, and planted it on the farm now owned by her father, Mr. Steele, in Chester Co., Pa. This does not correspond with Mr. Ott's account, unless it be shown that Mr. Prevost lived in Chester Co., Pa., previous to going to Frenchtown, N. J. These statements do not furnish sufficient ground for retracting our remarks last month, to wit: "We can not tell the history of its origin, and no one can with any assurance of certainty."

A few Hints for the Garden in Winter.

1. Did you, last Fall, throw up hillocks of dirt around your fruit and ornamental trees liable to be girdled by the mice? If not, then do now the next best thing, viz: go out frequently during the Winter and trample down the snow solid around every tree, and throw up more of the same around the bole. This will make it hard work for the varmints to get at the green bark.

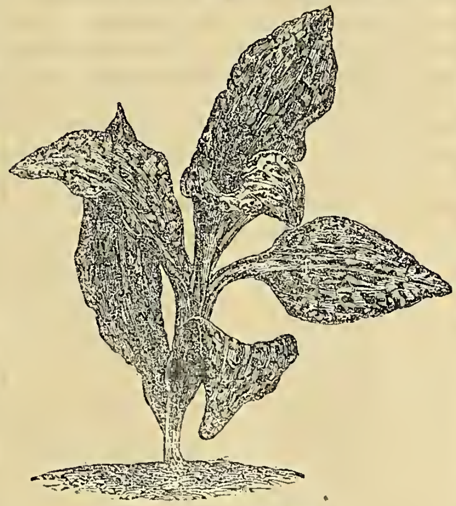
2. Did you, last Fall, protect some of your tender trees, shrubs and plants, by matting or evergreen branches? It would be strange if some of these coverings had not got loose, by this time. Take a tour through the lawn and garden and see how they get on. A few minutes' work with a few strings to tie up loose things, will save you much disappointment and loss.

3. Perhaps the damp snow has lodged upon the boughs of some of your finest trees, evergreens in particular, and is likely to break them off. Go, this very day, and shake off the snow, and perhaps tie up the straggling branches to prevent injury in future. A stitch in time, etc.

Sports among Flowers.

Double flowers, as nearly everybody knows, are sports, that is, variations from the original type, which is single. A wild rose, (which is always single,) if taken from the woods and planted in a garden and highly manured, will often become double. The stamens seem to be hurried and forced out of their natural development, and turned into petals. To the eye of a botanist, such flowers are monstrosities.

We have seen a rose-bush which is famous for its sports. It is a white, everblooming rose, and is almost always in flower. Sometimes the petals of a bud will be streaked with red, then mottled and flecked with crimson. Sometimes a single petal will be crimson, while all the rest are white. And, strangest of all, occasionally, one blossom will be entirely crimson, while the others are white, or delicately striped. These sports occur most frequently late in the summer, on the approach of frosty nights. It would seem as if the plant were a cross between a white and crimson rose, possessing most of the nature of the white parent, but occasionally developing a little of the blood of the crimson parent. The like of this is often seen in human families. We ought to add that this rose-bush is set in deep, rich soil, and is often treated with rotten leaves and chip-dirt.



What is its Name?

Miss Lucy A. Watson, of Orange Co., Vt., sends two leaves, and a pencil sketch, of which the above is an engraving. She writes: "I found this little plant at Thetford Slate Quarry, near the Connecticut river. I have never seen one in blossom, and so can not ascertain the name, which I should like to know. In November I found one specimen with the scape about four inches high, bearing little round pods like lobelia, but the seeds were gone. The plant had turned yellow, so I inferred that it was a biennial."—The plant we have frequently seen, but do not at this moment recall its name. The pencil sketch sent, appears very life-like; we shall be obliged to Miss Watson for pencilings of other plants in their season.—ED.

Castor Oil Plant Ornamental.

No plant in our garden the past season presented a more pleasing, showy appearance than the PALMA-CHRISTI (*Ricinus communis*), commonly called the castor oil plant, because its seeds, which resemble small mottled beans in form and color, when pressed yield the common castor oil, so abundantly used as a cathartic medicine. May 7th, some seeds furnished by a subscriber, were planted thickly in a drill twenty feet long. The weaker plants were gradually thinned out until only fifteen were left. These grew rapidly and by the middle of August were seven to ten feet in hight, and in bloom. The leaves growing alternately upon long stems were nearly circular, and many of them measured over two feet in diameter. The round hollow stalks were 1½ to 2 inches in diameter, smooth and covered with a rich bloom. The leaves cast a broad shade. The plant gives one a fine conception of the tropical palms, and taken altogether, we consider it highly ornamental in any garden.

This plant is interesting in another way: commentators are pretty generally agreed, we believe, that it is the veritable "Jonah's Gourd," referred to in the Bible. The original word, *kikayon*, translated "gourd" is believed to refer to the *Palma-Christi*. Its rapid growth, and heavy shading foliage favor the idea; and that it withers quickly, we had a good illustration of. Wishing to exhibit a plant to a Sabbath school in connection with some remarks upon the history of Jonah, we cut one when just starting from home, but before we could get to the school room, say in fifteen minutes, the leaves were completely wilted down.

In some parts of the country the castor oil plant is raised largely for manufacturing oil from the seeds or beans; but very many persons have never seen it. To give such an opportunity to become acquainted with it by raising a few plants we have placed it in our Seed Distribution (No. 111). It will grow to considerable size in any of the northern States we believe, though it will not mature seeds at the extreme north. Its size will depend upon the warmth, dryness and richness of the soil, and upon the season, as in some places it is a mere dwarf but a few feet high, while in tropical climates it shoots upward twenty to thirty feet, or more. A brief chapter on its culture for profit, from some experienced grower in Southern Illinois, Missouri, Kentucky, or Virginia, would doubtless be interesting.

A Spurious Scotch Pine.

Every planter knows that one of the most commonly planted evergreens, is the Scotch pine, or Scotch *fir*, as it is often incorrectly styled. It is a noble tree, of rapid growth, perfectly hardy, and of fine tint. Yet it seems there is a spurious sort in market, and purchasers must be on their guard.

The late Sir Walter Scott, an enthusiastic planter and a skillful writer about trees, speaks of this spurious variety and cautions his friends against it. On reading his lines, we at first thought he might be running a comparison between the European Silver Fir (*Picca pectinata*), and the American Balsam Fir (*Picca balsamea*), but a careful reading showed that he was speaking of *pines* and not *firs*. His description of the interloper is so clear, that we copy it from the Foreign Quarterly Review:

"We may remind the young planter, that the species of fir which in an evil hour was called *Scotch*, as now generally found in nurseries, is inferior in every respect to the real Highland fir, which may be found in the north of Scotland, in immense natural forests equally distinguished for their romantic beauty and national importance. This last is a noble tree, growing with huge, contorted arms, not altogether unlike the oak, and forming therein a strong contrast to the formality of the common fir. The wood, which is of a red color, is equal to that brought from Norway; and when a plant, it may be known from the spurious or common fir, by the tufts of leaves being shorter and thicker, and by the color being con-considerably darker. The appearance of the Highland fir, when planted in its appropriate situation amongst rocks and crags, is dignified and even magnificent; the dusky red of its massive arms and the dark hue of its leaves forming a happy accompaniment to scenes of this description.

The ordinary fir is an inferior variety, brought from Canada half a century ago. Being very prolific, the nursery-gardeners found it easy to raise it in immense quantities; and thus, though a mean looking tree, and producing wood of little comparative value, it has superseded the natural plant of the country, and it is called, *par excellence*, the Scotch fir.

There is a great difference betwixt the wood even of this baser species, raised slowly and in exposed situations, and that of the same tree produced upon richer soil—the last being much inferior in every respect, because more rapid in growth."

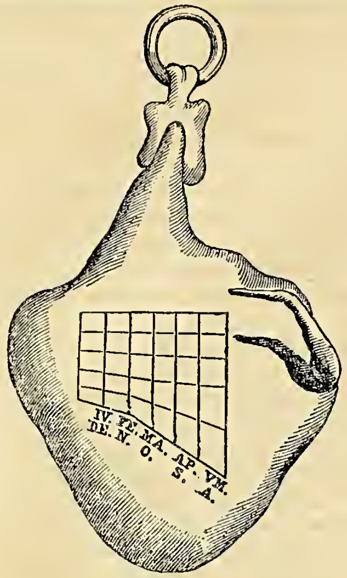

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Fig. 1.

Rural Embellishments.

SUN DIALS.

[The following article was designed for two papers, but it should all go together, and we leave out some other good things to make room for it here. It has cost a good deal of investigation and labor, and is the first, and indeed the only complete article that has appeared on the subject—at least in this country. The introductory portions are rather historical, but the casual reader even, will be much interested in the latter part, if not in the whole.]

Last month under the head of "Rural Embellishments," we discoursed at some length, of terraces and vases. We now propose to pursue the general subject, speaking particularly of sun-dials.

The practice has long prevailed, and does still, to some extent, of setting statuary or sculptured figures of men and women, (generally symbolical,) on pedestals in different parts of the pleasure-ground. There is a pleasing significance in the usage, to which we are not insensible. They highten the expression of the place where they stand, and give it an air of classical elegance and finish. But it admits of a question whether the naked or nearly nude figures, copied often from statues of Southern Europe, are exactly appropriate to our climate and our state of society.

> "All heathen goddesses most rare,
> Homer, Plutarch, and Nebuchadnezzar,
> All standing naked in the open air,"

doubtless looked well enough on the balmy shores of the Mediterranean; but in our hyperborean regions they suggest the idea of discomfort, and make one feel sympathy for the poor things, who ought to have more clothes on, especially in cold, stormy nights! The exhibition of such fig-leaved characters may have answered well enough in the social state of classical times, and of Southern Europe since; but in our country, and in our present condition of society, we doubt whether the moral influence would be beneficial. At least, the taste is questionable. Instead of Hebes and Venuses "wooing us from the tops of marble columns," why not introduce some fanciful rural objects, or some artistic embodiment of the pleasant ideas which the country and the garden always suggest?

And among these, we would mention the *Sun-Dial*, as being both useful and ornamental. Says Downing: "Sun-Dials are among the oldest decorations for the garden and grounds, and there are scarcely any which we think more suitable. They are not merely decorative, but have also a useful character. When we meet daily in our walks for a number of years, with one of these silent monitors of the flight of time, we become in a degree attached to it, and really look on it as gifted with a species of intelligence, beaming out when the sunbeams smile on its dial-plate."

The Egyptians or Babylonians (we can not determine which,) first devised this instrument. The Hebrews also used it at an early day. In the 20th chapter of Second Kings, mention is made of the dial of Ahaz, 713 years before the Christian era. It will be remembered that in those ages they had no magnetic needle to mark the north or south, and no clocks or other time pieces to mark the hours. The Egyptians were the first to determine accurately the position of the meridian (noon line), and to divide the day into twenty-four equal parts. They placed their pyramids in the direction of the cardinal points. It was not long after this, that the Greeks began to cultivate the sciences of geometry and astronomy; then they outstripped all other nations in minute and accurate divisions of time. About 600 years before Christ, Anaximander erected a *gnomon* or pyramid, which showed the time of noon, either by its shortest shadow, or by the shadow falling on a meridian line. He was instructed in the art by Thales, who studied in Egypt. One ancient historian records that the Greeks learned the art of dialing also from the Babylonians.

The Romans were very slow to adopt any scientific method for dividing time. As late as the fifth century after the building of their city (300 years before Christ), the only periods of the day noted were the *sunrise*, *sunset*, and *noon*, which last was proclaimed aloud by a herald from a certain high point of the city. One account states that the first dial known in Rome, was placed near the temple of Quirinus, about the year of the city 460 (292 years before Christ). Another writer doubts this, and puts the date 30 years later, during the first Punic war, and says that the dial was brought home as a trophy of battle, from Catania, Sicily. It was not a perfect time-keeper, because there were four degrees difference in latitude between Rome and Catania for which it was constructed. But they managed to use it ninety-nine years, when the consul Martius Phillipus caused another and more accurate one to be made. Doubtless some sharp-witted Greek constructed it, for Roman conquests had now begun to bring many of those acute and learned people to the imperial city. But how should they contrive to determine the hour by night, and in cloudy weather? It took a century of study and experiment to answer this. And here, again, Greek wit availed to invent the *Clepsydra*, which was an instrument for measuring time by the dropping of water, and not unlike the modern hour-glass. They were used in public and private houses, slaves being stationed near, to watch and announce the time as indicated by them.

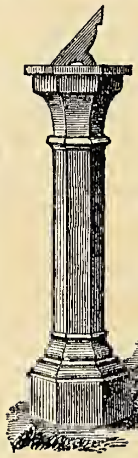


Fig. 2.

Ancient literature contains frequent allusions to Sun-Dials. The Grecian poet Menander introduces into one of his pieces a hungry parasite sitting by a dial and watching the arrival of the hour of his usual meal, "but in his eagerness, he had begun so early as to mistake the light of the moon for that of the sun." Some writer relates that a Sun-Dial having been shown to Epicurus (the father of high-livers) he exclaimed: "What a fine invention to prevent one forgetting the hour of dinner!" A jolly Greek once engraved an inscription on his dial-plate, to this effect: "Six hours of the day are given for labor; the remaining four say to mortals, *Live.*" These four hours are marked on the dial with certain letters which taken together from the word "Live."

In a fragment of a comedy of Plautus, an epicure is represented as exclaiming against sun-dials in these terms: "May the gods confound the fellow who first invented hours, and placed the dial here, which doles out the day piecemeal to me, an unhappy wretch! For when I was a boy, my belly was my dial, and it was by far the best, and truest of them all: I ate whenever it warned me,—that is, if anything could be had—but now, whatever there may be, it is nothing, unless, forsooth, it pleaseth the sun. Indeed, since the town is filled with dials, the greater part of the people crawl about starving with hunger!. . . ."—The best accounts we have seen of ancient sun-dials, assert that Berosus, the Chaldean, invented the dial called the *Hunicycle;* Aristarchus of Samos, the *Scaphe;* Dionysidorus the *Cone-Dial;* Scopas the *Plinthium;* and others contrived other sorts with such crooked names that we can not undertake to write them. The Greeks had also portable dials which they used in traveling. The dial of Aristarchus was probably the simplest of all. "It was a hemisphere cut in a cubic block of stone, having its base horizontal. At the bottom of the cavity, a style (rod, or pointer) was erected, the top of which was at the center of the sphere. It is easy to see that the summit of the style would during every day describe an arc of a circle. Several antique instruments (dials) of this kind have been found: the first in 1741, in the ruins of an ancient Roman house at Tusculum, which appears to have belonged to Cicero. It was placed in the museum of the Roman College in 1746, and is considered very valuable on account of its antiquity and its having belonged to the great Roman orator." Several other dials of similar pattern have been found in the neighborhood of Rome and among the ruins of Pompeii. Ancient monuments also reveal to us the forms of numerous dials. One at Ravenna (Italy) has the figure of a hemisphere supported on the shoulders of a Hercules; another stands on a simple column. Another curious dial, (see fig. 1,) a portable one, was dug out of the ruins of Portici, in 1755. Its shape is that of a bacon-ham, and it is suspended by a ring fastened to the leg. The end of the tail answers for the *style*, or *gnomon*, and the hours are marked on that part of the ham which is nearest a plane surface.

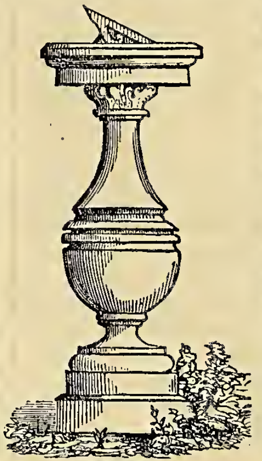


Fig. 3.

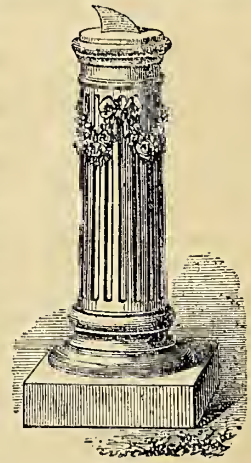


Fig. 4.

It appears that the Arabians understood, quite early, the science and art of dialing. One Jacob

Alkendi, a learned man, wrote on shadows, A. D., 1579, also a treatise on Dials, called *Sciotherica.* Mention is made, also, of a Turkish savan, Mustapha ben Ali, who wrote a book in 1533, on the same subject. Upon the revival of learning in Europe, this science received increased attention; and, during the 15th and 16th centuries, treatises were written and new styles of instruments invented, almost without number. But, as lamps are not needed after sunrise, so, when clocks were invented, dials went gradually out of general use. Yet, as clocks would often get out of order, and needed regulating by some correct standard of time, dials were still found serviceable. They were also favorite embellishments of pleasure-grounds, because of the beauty with which they might be constructed, and the interesting associations time invested them with. Accordingly, we find that they have continued to be used to the present day, in all parts of Europe, and they are now being introduced more and more into the gardens and lawns of our own country. On beholding one of these classic registrars of time, in an English garden, Montgomery wrote "The Dial," of which the following is the first verse:

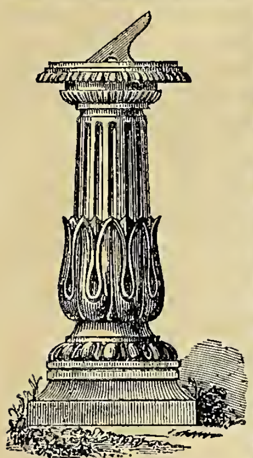


Fig. 5.

"This shadow on the dial's face,
  That steals from day to day,
With slow, unseen, unceasing pace,
  Moments, and months, and years away;
This shadow, which, in every clime,
  Since light and motion first began,
Hath held its course sublime—
  What is it?—Mortal man!
It is the scythe of time:
  —A shadow only to the eye;
Yet, in its calm career,
  It levels all beneath the sky;
And still, through each succeeding year,
  Right onward, with resistless power,
Its stroke shall darken every hour,
  Till nature's race be run,
And Time's last shadow shall eclipse the sun."

The *practical working* of the more common sun-dials may be explained thus: A circular or semi-circular plane surface is first provided, from one to two feet in diameter, more or less. A rod is supported over it, lying north and south, but with the north end elevated so that it shall lie parallel with the earth's axis; that is, the north end raised as many degrees from a horizontal position, as the instrument is located north of the earth's equator in degrees of latitude. In latitude 45° for example, the north end would of course be elevated 45 degrees, or just half way between horizontal and perpendicular. Instead of a rod on a support, a metallic plate is generally used, having the upper (northern) point projecting a little way. The plane is marked off with lines where the shadow of the point falls at different hours of the day. Sub-divisions of half and quarter hours, and sometimes minutes, are also made. A plate makes the shadow from its upper edge more distinct than if only a small rod were used. We have taken pains to collect and engrave a few of the finest patterns of Dials which we could obtain. We hardly advise our readers, Jew or Gentile, to copy in their pleasure-grounds the bacon-dial, above shown,—as a matter of *taste,* they might do better—still it is worth the while to keep a picture of it, as a curiosity.

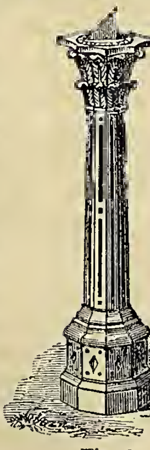


Fig. 6.

Fig. 2 represents a simple, plain style, suitable for any body or any place. It might be cut out of granite or other stone; or, if made of pine or cedar, and well painted, it would last for many years. It will be understood that there is upon the top of each of the upright shafts represented, a horizontal plate marked with hour lines upon which the shadow from the indicator falls at the several hours.

Fig. 3 is a pattern devised by the eminent sculptor, **Thom.** It was first exhibited in this country, at the Fair of the American Institute in 1842, and was highly commended by the critics. It needs to stand upon an elevated terrace, or plinth of cut stone, to appear to the best advantage.

Fig. 4 is another good style. It has a solid look, yet is relieved of stiffness by the wreath entwined about the upper portion of the shaft.

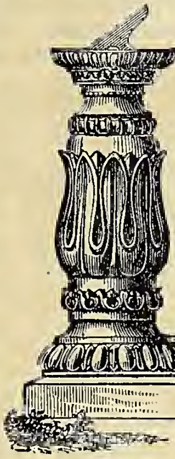


Fig. 7.

Fig. 5 is perhaps the most perfect design we have to present. We are indebted for it to the kindness of Mr. C. M. Hovey, of Boston. If some of our city manufacturers of ornamental iron-work should make castings of this beautiful pattern, it would undoubtedly meet the wants of many amateurs.

Fig. 6 is a sketch of the Dial standing in the grounds of the late Mr. Downing, at the time of his death. A genial and appreciative writer, (Mr. Clarence Cook,) in giving a description of Mr. Downing's place shortly after his decease, speaks thus of his dial: "In passing along the path which we have entered, you catch a glimpse through the trees of the little sun-dial, with its motto, "*Horas non numero nisi serenas,*" (I number none but sunny hours,) and few others ever passed over this happy place. When I first saw this dial, the ice was on the ground, and a little hillock of snow upon the top of the pillar, prevented the sun from recording the hours. I brushed away the snow to find the time. Mr. D. was with me, and, I remember, told me about some ancient dial he had seen abroad. This morning, the first snow is on the dial and on his grave."

Fig. 7 is a very good style, which we found in cast-iron, at Janes, Beebe & Co's in this city. Painted white, or any soft tint, and then sanded, to represent stone, it would have an excellent effect. It needs a cap of marble or other stone, to which the metallic dial-plate can be adjusted. This and all the patterns we have given, need to be set on a solid foundation of stone laid in mortar three feet below ground.

It is quite customary to engrave some motto or other inscription on the dial-plate. Of these, we give a few examples. The one adopted by Mr. Downing, and given above, is an ancient and very appropriate one. A neighbor and personal friend of Mr. Downing, sends us the following: "*Pereunt, et imputantur,*"—which may be freely rendered, "The hours are passing away, and are reckoned against us."

Here is another common one, and not very significant: "Time rides upon the dial's point."

A neighbor and friend contributes the following, copied from a dial in his own grounds,—"*Occasio calva post,*" which we suppose means that "Opportunity lost is irrecoverable." Or it may be done into the familiar exhortation: "Take time by the forelock." A wag once standing by this dial-pillar and reading the rather blind motto, translated it thus: *An apology for a calf-post!*

Dr. Henry Bowditch, of Boston, being about to set an antique sun-dial, sent to the poet, John G. Whittier, a request for a suitable inscription. The poet returned the following gem:

With warning hand I mark Time's rapid flight,
From life's glad morning to its solemn night.
But through the dear God's love I also show
There's light above me, by the shade below.

But without pursuing this subject any further, at present, we conclude by requesting any of our readers who may have good mottoes in their possession, to send them to us for future publication.

Making Home Attractive—A very Important Suggestion.

[In the multitude of subscription letters arriving at this season, there very often comes an added postscript, conveying an important thought, or a private word of approval and encouragement from some unknown reader, to which we attach far more value than to the money enclosure. From among many such we select the one below. The first part is printed not so much to gratify our own feelings, as to place it where we can ourselves see it often, as a thing to be aimed at, rather than one yet attained. We could not have described so well the character we would desire to have the *Agriculturist* merit.—The second part we print in emphatic type, hoping thus to impress its important truth more strongly upon the attention and memory of every parent.]

To the Editor of the American Agriculturist.

"In forwarding my subscription for 1860, and that of a relative to whom I wish the paper sent, I can not forbear expressing the satisfaction with which I have read the *Agriculturist.* I admire: 1st. Its candor, good sense, and genial spirit—2nd. Its steady, keen, and often amusing war with humbuggery—3d. Its broad views of agricultural interests—4th. Its illustrative engravings, at once beautiful, instructive, and calculated to allure to its pages the attention of the young, and of the anti-book farmers; the pictures are capital *bait* to the good reading—5th. Its high moral tone. An undevout agriculturist, like an "undevout astronomer is mad"; but unhappily, editors, like other men, are sometimes shy of expressing their opinion on the right side. I have been pleased to observe the spirit of the *Agriculturist* in this respect.—6th. Its arrangements for instructing, as well as amusing the children, helping them to understand how, with moderate means, a home can be made neat, comfortable, and attractive.."

"*There is one thing I would be glad to see more parents understand, namely, that when they spend money judiciously to improve and adorn the house, and the ground around it, they are in effect paying their children a premium to stay at home, as much as possible, to enjoy it; but that when they spend money unnecessarily in fine clothing and jewelry for their children, they are paying them a premium to spend their time away from home, that is, in those places where they can attract the most attention, and make the most display.*

With the best wishes for the continued prosperity of the *Agriculturist,* Very cordially yours

Willimantic, Conn. Samuel G. Willard."

Conversation, however light, should never approach in the least to the confines of impurity

Papering Damp Walls.

When paper is put upon damp walls, as in basement rooms or walls of stone houses, it is liable to mold and become discolored; it also easily peels off, the paste having no opportunity to dry, or becoming moistened afterwards. Mr. Chas. Streeper, Montgomery Co., Pa., suggests that this may be prevented by nailing narrow wooden strips, say half an inch thick, upon the wall, at intervals of six feet, and tacking sized muslin to these, upon which the paper may be pasted, thus keeping it from contact with the wall. Another correspondent advises in such a case to fasten the strips perpendicularly to the floor, and to pierce the paper with a few fine holes at the top and bottom to allow the circulation of air to carry off the dampness, for if the damp air were confined behind the paper, it would mold it. The wooden strips should not be so far apart, perhaps, yet when widely separated, the cloth and paper would yield, and lie back against the wall when pressed against. However, an arrangement of this kind would not admit of the very common but unmannerly practice of tilting back in a chair against the wall, as the paper would be torn, especially near the slats. It might prove a good thing on this account, saving the backs of chairs, preventing holes in the carpet, dents in the floor, and a lazy habit in loungers.

Hints on Kindling Fires and Using Hard Coal.

"It takes a fool or a philosopher to build a fire well," is an old saying. The fool blunders into the right way, and the philosopher finds it out scientifically, is the only explanation we know of for the adage. Certain it is that many persons make blundering work in starting fires, and in keeping them going. This is particularly the case in using the harder kinds of mineral coals. The softer Liverpool and American *bituminous* coals burn readily. In very many localities where wood is still used, mineral coal would take its place but for want of experience and skill. No housewife who has once become familiar with the steady all-day-heat of a good coal fire, will ever desire to return to the fitful, constantly-to-be-replenished wood fire, either for cooking or warming purposes. A tun of coal affords more heat than a full cord of the best hickory wood, so that when a ton of hard coal costs less than a cord of hickory wood all cut and ready for use, it is economical to adopt the former. Most other kinds of wood are dearer than hickory, if we take into account their smaller heating power.

In kindling and keeping up a fire, it is important to understand the "why and the how" of a draft of air. Warm air is lighter than cold, and consequently rises upward. To direct this draft to the point where it is needed, is the essential thing. The back woodsman puts down his back-log, sets the andirons or stones in front of it, lays on a heavy "fore-stick," and places one or two small sticks between this and the back-log, and starts the fire in the throat or narrow passage thus formed. The heated air rising, makes a draft through this small opening, sufficient to start the spark into a blaze.

In kindling all fires, it is important to secure this draft at the point where the fire is to be started. In a stove, if the fire be started back in the center, or on the top, only a little direct draft is obtained at the point where it is most needed. Put the kindlings at the front, or at the bottom, and close up access of air from other points, and the upward draft produced by the warm air in the pipe or chimney, draws a current of air through a small aperture in front, or at the bottom, where it is concentrated directly upon the kindling. The modern egg-shaped coal stoves have a small opening at the lower end for the entrance of the air, and are therefore most convenient for starting coal fires. The conical wide bottom stoves with a broad grate are better for giving a strong heat after the fire is started, because they present a larger air surface underneath.

We may here remark, that a thick or deep bed of coal is not economical in any stove, for the reason that the oxygen of the air is nearly all exhausted in the lower part, and the heat thus produced, changes the upper layers into gaseous products which go off unconsumed. Three or four inches of hard coal is all that can be burned economically. It is better to use only a thin layer, and replenish it more frequently. "Little and often" is a good rule. No more should be used than will be kept at a bright heat at the surface. The same reasoning applies to wood, as to coal. In a large body of wood where there is a free draft above, and only a little air admitted below, a portion of the fuel goes off unconsumed.

In kindling a coal fire, especially on a wide grate, we have found the following a good plan: Cover the grate with thin flat pieces of wood except in a small place in the center, or at one side near the draft hole. At this open place put a small compact mass of fine kindlings—not a quarter of the amount usually taken—and ignite them, putting on a considerable quantity of coal before, or soon after. The rest of the grate being covered, the draft is concentrated at the point where the fire is starting, and rapid heat is evolved. An upward draft is established, and the spreading heat soon burns away the thin pieces and in a short time the whole mass is kindled. In the absence of the flat pieces of wood, we have sometimes partly stopped the grate with small sticks laid into the openings, and sometimes partly covered it with ashes, to be raked out beneath, when the fire is well started at the open point. We have pitied many persons as we have seen them put in a whole armful of poor kindling wood over a whole grate, and then vainly try to get up a fire at one point. The small draft in the upper part produced by the feeble fire, draws air through the entire grate, but not enough at any point to produce rapid ignition. These remarks apply equally to wood and coal fires, both in stoves and fireplaces. We repeat: In all cases so arrange the fuel that the draft of air shall come from below, and be concentrated where it is most needed.

Dampers in stove pipes, or Chimneys are an abomination, unphilosophical, or at least unhealthy. Their object is to cut off or lessen the upward draft of air, and make the fire burn slower. There is a better way. Open the door, or in some other way admit air *above* the fire. This stops a part of the current of air passing through the fuel, and of course lessens the consumption, while enough air will still pass upward to keep it alive. The current of air passing through the door helps change the air of the room which is never too pure. The same end may be obtained by closing or nearly closing the draft beneath the coal so as to shut off the supply of air. A coal fire may be kept twelve to twenty-four hours, by nearly closing the draft underneath, and partly opening the door above the fuel. A little experience is necessary in every stove or furnace, to know just how far open to place a door, as this depends entirely upon the draft power of the pipe and flue above. The *higher* the pipe or flue be carried, the greater will be the draft, as this depends upon the *perpendicular* length of the column of light heated air.

The fool may blunder into building a fire well, but a general understanding of the "philosophy" of combustion would save more than one-fourth, if not one-half of the fuel now consumed in the country (many millions of dollars a year), and contribute not a little to people's comfort, and the maintenance of good temper. How many single "frets" are daily uttered over fires? How many persons will get through this Winter without scolding once a day, on the average, about some defect in, or trouble with their heating apparatus. Let every one, stop scolding for a month, and go to studying the philosophy, the science, of heat, hot air currents, etc., and practice upon what they learn. Perhaps we may help you further.

A Talk about Common Salt.

As common, and as abundant as is the use of salt, yet with this, as with many other common things, very few know anything of its composition, character, or utility in food. Let us look into the matter a little, And first a bit of science. Though existing in different forms, as *spring* salt, *bay* salt, *rock* salt, etc., all kinds, when pure, have precisely the same composition. The chemist will take 58½ ounces of pure salt, and show you that it is made up of 23 ounces of a white metal, called *sodium*, united with 35½ ounces of a greenish colored gas, called *chlorine*. (The chemist calls salt "*chloride of sodium.*") The metal, sodium, is like bright silver in appearance, but it is nearly eleven times lighter than silver. The chlorine is an air-like substance, 2½ times heavier than air, and not quite so transparent, for when a glass jar is filled with it instead of air, it has a greenish color, though you can see through it, if the jar be not large. This gas has a strong pungent odor, so much so that a pint jar full of it let out into the air in a large room, would set you to coughing, and a few quarts of it in the room would produce death.

If you fill a jar holding nearly five gallons (881 cubic inches) with chlorine, and then drop into the jar a single ounce of the white metal sodium, all the gas will condense down and unite with the little piece of metal, and you will then have 3½ ounces of pure salt. Is it not strange, wonderful even, that two such substances, as the pure bright metal, and the suffocating gas should thus unite, and make so simple and inert a substance, as the salt we eat every day? Yet this is a fact, and it is only one of the wonders that chemistry reveals to us respecting the most common things around us. If you want to help your imagination, just put a little salt in a saucer, and pour upon it a few drops of oil of vitriol (sulphuric acid), which every druggist keeps. The acid will take away the sodium, and the chlorine will rise up in a large volume, and almost suffocate you, unless the operation is performed in the open air, instead of in a closed room. (The chlorine thus obtained is not pure; it is united with another gas, hydrogen, obtained from the water in the acid; but the experiment will help the imagination, and give pleasure.) We hope this bit of science will make our common salt a more interesting object hereafter We may add here, as a matter of interest, that calomel, that much dreaded medicine, is made up just as salt is, that is, with the same chlorine gas, and another metal, quicksilver (mercury), which takes the place of the sodium in the salt.

If you look at the finest ground salt with a magnifying glass, you will see that it is wholly made up of little cubic (square) blocks. These are very small, but the largest grains or blocks (crystals) of salt consist of a great number of the smaller blocks arranged together. Generally these little blocks unite together so as to leave a hollow in the center, which contains water. When you heat salt on the stove, or on the hot iron, these little drops of enclosed water expand into steam, and burst open with a crackling noise, like so many little steam boilers exploding.

Into 100 pounds of water, put 37 pounds of pure salt, and it will all dissolve and apparently disappear, but add another pound, and the excess will not dissolve by heating or long standing. The cubes or crystals are all destroyed. Now heat the water so as to drive some of it off in vapor, and the little blocks (crystals) will begin to appear upon the surface, hardly perceptible at first, and grow larger and larger, and finally sink down in grains to the bottom. Keep up the heat until all the water is driven off, and you will get all the salt back. If the boiling be rapid a fine grained salt is obtained. Let the evaporation be done slowly, so as not to agitate the brine, and a greater number of the little blocks will unite together and form larger crystals, or coarse salt.

Sea water, when evaporated in the sun, or by boiling, leaves its salt behind, and we thus get sea salt, or bay salt. Much salt is made from sea water at Turks Island, 200 miles east of Cuba.

Many springs, and wells, contain salt which can be obtained by boiling away the water, or drying it off in large shallow pans or wooden boxes. Millions of pounds of salt are thus obtained at and near Syracuse, N. Y., where hundreds of acres are covered with boxes or vats, and boiling establishments. The water is obtained there from natural springs, and especially from deep artificial wells. At many other places, smaller quantities are made from spring or well water.

Large beds of solid salt, ready formed, are found in some parts of the world, and salt is dug out from these, just as coal is dug up from the earth. This is usually called "rock salt," though salt manufactured from sea water, when in large crystals, is frequently called rock salt.

Most salt, especially that boiled down at the springs, contains a mixture of magnesia, lime, etc., (in the form of chlorides.). These give it a bitter taste, and injure its value, especially for salting butter. These impurities attract *moisture* from the atmosphere, and you can generally determine the purity of salt, by observing whether it is dry and crisp, or damp and soggy to the hand, especially in damp weather.

It is easy to remove the magnesia and lime, for the chlorides of these are more soluble than the pure salt. To do this, pour about three quarts of boiling water upon 18 or 20 pounds of salt in a pail, stir it quickly and thoroughly; let it stand for an hour or two, pour off the water, and hang the salt in a bag, or lay it on a cloth upon slats to drain and dry. One washing will nearly purify it, but two washings may be made, when the very best salt is desired. The water from the second washing may be left to evaporate, and the salt obtained, used for animals. A quart of water will wash out about ¾ pound of salt.

So much for the general character of salt. In another article we will speak particularly of its use in food, its good and bad effects upon the human system, the proper quantity to be consumed in food, its use in preserving meat, etc.

Hints on Cooking, etc.

CURING HAMS.

Mr. I. Lamborn, Chester Co., Pa., writes that he has cured hams and rounds of beef (for smoking) by the accompanying directions, for thirty years past, and with the best success: Apply as much good molasses to the fleshy part, as will adhere without running off, lay them on a table in a cool place, and put upon and around them as much good ground salt as will stick to them, pushing some of it into the ends of the hocks. Renew this during three weeks as often as it dissolves. Use no saltpeter. Then clean off the salt, sprinkle lightly with a mixture of black and red pepper, and smoke. It is of much importance that the smoke should be cool when coming in contact with the meat, to secure which the fire should be at some distance from the hams."

OYSTER SOUP.

Mrs. Crowen's Book gives the following good directions for making it: Heat together three pints each of milk and water. While boiling, add half a pound of butter crackers pounded, and a pint of oysters chopped fine. Cook until the Soup is well flavored by the oysters, and the crackers are well swelled; salt and pepper to the taste, add three pints of whole oysters, and quarter a pound of sweet butter. Keep covered, and cook ten minutes more, and it is ready. [We would leave out a part of the butter at least.]

TIP TOP CAKE.

A lady reader recently sent us a neat box of cake, and accompanied it with the directions for making. We endorse the name, the cake was *tip-top:* Dissolve 1 teaspoonful soda in 1 cup of sweep milk; add 1½ cups sugar, 2 eggs beaten, and 1 tablespoonful of butter, with spice to taste; stir 1 tablespoonful cream of tartar in 2½ cups flour; then mix the whole, and bake in a quick oven.

HONEY DEW BISCUIT.

Mix thoroughly one cup of fresh butter, one of loaf sugar, one ounce of strained honey, one cup sour cream, two of flour, one teaspoonful soda (rubbed dry in the flour), half a teaspoonful salt in the cream, and one egg. Bake in a hot oven 25 minutes. We have frequently seen it recommended, and it reads well, though we have not yet had it tried.

HAM TOAST.—Mrs. C. O. Brown, Calhoun Co., Mich., directs: Boil ¼ lb. of lean ham, and chop it fine. Add the yolks of 3 eggs, ½ oz. butter, 2 tablespoonfuls cream, and a little red pepper [not for us—ED.]; stir it over the fire until it begins to thicken, and spread it over hot toast.

SALTING BED-BUGS.—Mrs. F. E. Dixon, Monroe Co., Mich., recommends washing bed-steads with strong brine, and then rubbing them with salt, which she says will infallibly expel bugs.

DIRECTIONS WANTED.

Some subscribers inquire for directions for making the genuine soda crackers; others desire to know how to get up the best Graham biscuit, or such as are sold by bakers. Will some retired baker or other person fully competent to do so, please respond to the above for the benefit of a multitute of ladies, taking their thanks for pay, or part pay?

Familiar Talks by the Doctor.—No. I.

[Farmers, as a class, are pretty healthy, yet even they and their families suffer much needlessly. The various ills and doctor's "bills," they ever stand in fear of, would, we believe, be greatly lessened, and their comfort be much promoted, were there a better understanding of the laws of health, and the methods of avoiding sickness and pain. It is with pleasure, therefore, that we begin in this number a series of familiar chapters, by one abundantly able to give sound practical advice. With this simple endorsement of the writer's ability, and we might add, reliability, we will leave his chapters to speak for themselves, as they will doubtless do in a manner both interesting and instructive.—ED.]

MR. EDITOR: It is said that the Chinese pay their doctors a certain sum so long as they have no need of professional attendance, but as soon as they fall sick, the doctor's pay stops. Such a system would have some advantages, and labor under some inconveniences. For instance, one might suppose that the doctor would try to cure his patient as soon as possible (which indeed every honest man in the profession now does), and thus save him some time; while on the other hand the patient might feign sickness, or even get himself a little out of health, as a matter of *economy*, to lessen the doctor's bill.

It is a very natural question for you now to put to me: "Why all this talk about Chinamen and doctors? Can you be coming round to *Dioscorea Batatas* or *Sorghum?*" True, both the sugar cane and the potatoes, so called, which bear these names, come from China, (some think that the Dioscoreas are big enough to come right straight through, without going round by sea), but I do not propose to talk of them. Neither have I got any 'ax to grind,' any selfish purpose, in addressing you, but I desire to talk as a Doctor to Farmers.

Perhaps you may think I desire to talk of pills, either big or little, of mustard plasters, of homeopathy or hydropathy, or some other pathy. Not a bit of it. I am a firm believer, (as I have reason to be) in the science of medicine as a whole, not split up into any *one-idea* kind of doctrines, and having a decided opinion, I do not hesitate to express it at the proper time, and at the proper place, neither of which this is.

My purpose is to point out to your many readers some ways in which farmers are unnecessarily careless of their health, entailing upon themselves much unnecessary suffering, and too frequently allowing their children to drop prematurely into their graves.

It has been my fortune, to see a good deal of farmers and of their families in a professional way, as well as socially. Of course, the little or great errors which they commit in their way of life, could not be unnoticed, and yet it is impossible to speak to the individual of some of these things. By speaking to the whole class, no one will feel personally aggrieved, and yet many may lay the lessons to heart.

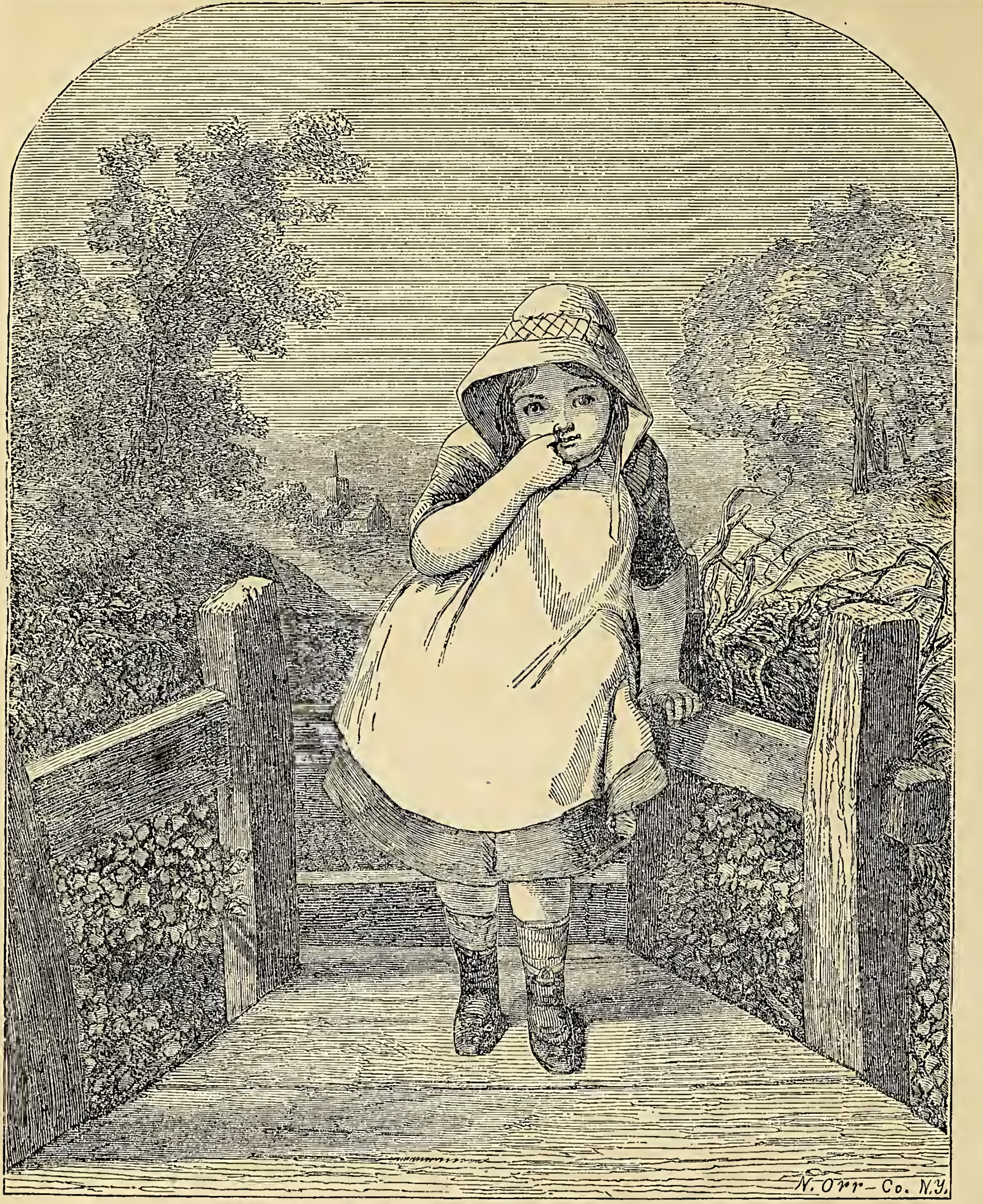
It also happens to have been my lot to talk to doctors a good deal for the last ten years, both by the mouth in the lecture room, and by the pen in medical journals, and I have very frequently had occasion to dwell on the health of our agricultural population, and upon those things which affect that class injuriously. So too, I have had occasion to comment on the employments of various classes of mechanics, and to point out some of the injurious influences which surround them. But in no *professional* journal can one reach so large a number of readers, as through the *Agriculturist.*

Should any crusty reader (I suppose, Mr. Editor, that you have some of that class, I hope not many,) growl at me for proposing to point out to him any error in his mode of life, which might be avoided to the benefit of his health, I make haste to say to him, that I do not for a moment think of giving *him* any information. But then, Mr. Crustyman, do you think it would be a very bad idea to hint to your neighbor, Jack Tremble, that if he would thoroughly drain that boggy meadow just across the road from his house, he would not only make a good thing of it agriculturally, but save a good deal of money that he now pays to doctors (perhaps to myself,) or for fever and ague remedies; and save a good deal of time that he now has to spend dawdling round, doing little or nothing, because he has a shake coming on, or has one going off, or because he has been weakened by the doses he has to swallow; to say nothing of lengthening his life ten or a dozen years? *He* has no idea that that boggy hole is what keeps him poor, when it is all ready with a little help to make him rich; but then *you* and *I* can see it plainly enough. Suppose we just go over and tell Jack what we think! He will take it kindly.

Between you and me, Mr. Editor, I have got something to say to Mr. Crustyman bye and bye, as to what gives him so much dyspepsia, as he calls it, and makes him a little inclined to be cross. But he will not bear it now.

An illustration of the way doctors see causes of ill health entirely within the patient's control, but without suspicion of the fact on his part, I draw from my own experience. While a medical student, I was once going with my preceptor to see a case of surgery, when a man stopped him, and asked him to come to his house to see his mother. We found her a nice person, about sixty years old. Everything showed that the farm was made to pay, and that the housekeeping was not neglected. After hearing the patient's story of pain through her chest and about her heart, I was running over in my mind the symptoms of various diseases of the heart, trying to make out which it was, and hoping I should have an opportunity to listen to the sounds which the heart makes. Dr. C. was evidently going through a very similar process. The result of my thinking was, that I did not know what the disease was; and I began to think the same was the case with my senior. He sat looking at the patient awhile, with a peculiar look in his eye, that I had learned to rely upon as promising that something odd was coming, and then suddenly asked her: "How many times a day do you smoke?" Thinks I to myself, well, Dr. C., you have made a pretty mistake this time, asking this nice old woman such a question, when to my astonishment she said: "Not usually more than three times" Her heart was sound, and all her troubles came from smoking, but she had no more idea of it than Mr. Crustyman has of the cause of his dyspepsia.

P. H. E.



"SLY BOOTS"—From a Painting in water-colors by C. H. Weigall
(Engraved for the American Agriculturist.)

The Editor with his Young Readers.

Ting-a-ling-ling, ting, ting-a-ling. School's open again for a new term. How short the vacation has been, since we dismissed you and closed up the last session, a month ago. Ah, here you come again young friends, by the hundred, by the thousand, aye, by the ten and twenty thousand! What a lot of you! Don't you enjoy being in so large a company? We do. We can't stop to call the roll today. Some will be late perhaps—staying at home to finish up Christmas and New-Year's. Let's look out of the window, down the road, and see the troops of new children, large and small—all so joyous and happy. But who's that down the lane there, all alone? Oh, that's

Miss "Sly Boots."

Wonder what she's up to now! Some mischief perhaps. No, not exactly mischief, there's more fun than mischief in her eye. See how she stands with her finger on her lip earnestly thinking of something. Her mother says "she's so full of fun it keeps running over." Well, we like to see children in good spirits, and we can't help liking "Sly Boots"—she is always so good natured. If any of her playmates are out of humor with themselves, or with others she gets them into a hearty laugh before they know it. But we wish she would leave off some of her mischievous tricks. Though we like her some, we would like her still better if we could forget that last Summer she made a hen's nest of her bonnet, shut the chickens in the pantry, dropped the kitten in the cistern to see it swim, covered the cat up in the churn to hear her mew, and, worse than all, hid her mother's scissors so as to see her perplexity in looking after them. Those were bad tricks. *None should ever make fun for themselves when it will give pain or discomfort to others, even to animals. That is selfish, and as bad, as to appropriate the money of others to enhance one's own comfort or enjoyment.* But our Miss "Sly Boots" has talked with us about those naughty deeds, and promised to be more careful hereafter; and we believe her, for she really felt bad. Still you can see she is as frolicsome as ever. Wonder what's the matter with her bonnet? It looks as if it had been a hen's nest again, or she had used it in catching butterflies. We are glad to see her appearing so plump and healthful. That comes of being active, with plenty of out-door exercise, and especially from being always cheerful. Good natured, cheerful children, always enjoy better health, and are more loved than those who are fretful, morose, fault-finding, or quarrelsome. Remember that, young friends. Now we must look after some of the lessons for the term, and we leave you to guess what "Sly Boots" is thinking of, standing there by the lane fence. Can you also tell us how she first got her name? Perhaps you know, we don't...... Why! why! we have been so much taken up with the picture, that we had forgotten what was first and uppermost in our thoughts—to wish you, one and all, Boys and Girls,

"A HAPPY NEW YEAR!"

and plenty of good things to begin it with, and memories full of credit marks when the year closes. It seems but as yesterday that we welcomed in the year 1859. How the years fly by, swifter than a weaver's shuttle, which you catch but a glimpse of, and it is gone. Yet it left a thread as it passed, and each thread helps make up the fabric. So these year shuttles are each contributing threads to the life's fabric. As the weaver constantly watches the woven cloth, to see if there be any broken threads, any knots, any poor spots, let us examine the little threads, the little acts, thoughts, feelings, and tempers, and see that there are none to mar our character, let us look over the work of the past year, and ascertain where we have failed, and resolve to watch more closely hereafter. Let us resolve today, that every thread in 1860, from the very beginning to the end, shall be as perfect as possible.... There are many

PLEASANT REMEMBRANCES

connected with the events of the past year, in our own experience. Perhaps nothing has pleased us more than to read in many letters from your parents: "The children love the paper:" and especially to receive from the boys and girls themselves so many good little letters. These, and our monthly chats, when we have sat down, and in imagination called around us a vast throng of little folks, have been pleasant indeed, and have lightened many hours of toil and care. There have been to us some dark days, as when we were in that "corner," we told you of; but every cloud has had its silver lining. Still

SAD MEMORIES

also come gushing up, as we recall the fact that some of those who reëchoed our own "Happy New-Year" last January, are not with us to-day. One and another of our company, like little Mary we told you about, has been called away to join another throng. Some of us will go this year. Let us all be ready to go as cheerfully as "Mary" went, and strive, like her, to be ready, having always on the spotless garments, purified from the stain and filth of sin, and fitted to wear among the dwellers in that better land.

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A CAPITAL TRICK THAT ENDED WELL.

Here is a good story which we have just heard. A young man (a brother to "Sly Boots" perhaps, for like her he enjoyed a good joke), was studying in college. One afternoon he walked out with one of his instructors, and they chanced to see an old pair of shoes lying by the side of the path, which appeared to belong to a poor man at work close by. "Let us have a little amusement at his expense," said the student. "Suppose we hide these shoes, and conceal ourselves in the bushes to watch his perplexity when he can not find them."—"I can think of a better trick than that," said the instructor. "You are rich, and suppose you put a silver dollar in the toe of each shoe and then we will hide."—The young man did so. The poor man finished his work soon, and went to put on his shoes. You can imagine his surprise, when he stooped down to take out a pebble, as he supposed, from the toe, and found it to be a hard dollar, and then his absolute perplexity and astonishment, when he found still another dollar in the other shoe. His feelings overcame him; he fell upon his knees, looked up to Heaven, and uttered aloud a fervent thanksgiving, in which he thanked a kind Providence for sending some unknown hand to save from perishing his sick and helpless wife, and his children without bread. Do you wonder that the young man stood in his hiding place deeply affected, and his eyes filled with tears? Young friends, and you Miss "Sly Boots," when you want to enjoy real fun, real pleasure at witnessing the perplexity of others, see if you can not in some way imitate the student. Such tricks are worth performing.

DID NOT KNOW HIS BEST FRIEND.

A laughable mistake is said to have occurred recently on a western steamboat. An elderly gentleman whose sight was not very good, while walking up and down the long saloon, stopped near one end, and addressed an individual he met, thus. "Is your name Scott"? No answer was returned. Thinking he must be deaf, he repeated in a louder tone, "*Is your name Scott*"? still no answer. Once more he shouted, "IS YOUR NAME SCOTT"? but receiving no reply he turned away saying, "Well, you are either no gentleman or very deaf." The passengers were convulsed with laughter—he had been addressing his own image in a large looking glass."

HOW "LEW" WAS CAUGHT.

A subscriber contributes the following: We had a colored man familiarly called "Lew," living in a tenant house not far from the homestead on the farm. He was considered shrewd, but proved eventually not to be over honest. Soon after his employment, our supply of eggs diminished rapidly, but we could not trace any of them to "Lew" or his wife, though there was an excess of egg shells near his house. One day he came into the kitchen and contrary to his usual polite custom, he did not doff his hat. Knowing his habit of scratching his head when perplexed, I asked him a puzzling question, up went his hat—and down rolled an egg, smash upon the floor! He could not well blush 'red,' but with a sheepish look he stammered out, "Guess I might better left um in the nest."

WEIGHING THE EVIDENCE.

A correspondent gives the following which is worth telling as it will be new to most of you, if not to all. A gentleman missed two pounds of very fine butter which he had kept for a special occasion, and charged the cook with having stolen it. She declared the kitten had eaten it, and that she had just caught her finishing the last morsel. The gentleman immediately put the kitten in the scales, and found she weighed only a pound and-a-half. The cook thus confounded, confessed the theft.

A RESERVED MAN.

Some people appear to enjoy themselves most, when let alone entirely. They say very little, and dislike to be questioned or even spoken to by strangers, and remind you of an oyster, who only opens his mouth to take his food. One of this class was traveling in a stage with a very talkative man who tried hard to engage him in conversation. They were both smoking, and the talkative man after speaking of several things and receiving no answer, remarked to his companion that the ashes from his cigar had fallen upon his vest, and a spark was burning his hankerchief. "Why can't you let me alone?" growled out the other, "Your coat tail has been burning the last ten minutes, and I didn't bother you about it."

FUN FOR BOYS IN WINTER.

Not skating, or coasting, or snow-balling, or sleigh-riding, and such like out door sports; these are all well in their place, and we hope you will enjoy them to the full. But we suggest some sport in addition. Do you, boys, ever make experiments in chemistry, philosophy, and do you gather specimens of wood, minerals, plants, seeds, etc? We knew a boy living in a log-house in the "Western woods" who made a great many of the experiments described in Comstock's old Philosophy and Chemistry, with materials found on the farm. He used tubes of elder wood for the hydraulic apparatus, for chemical tubes, etc.; with glass jars and bottles and soldier's brass buttons, he got up a very effective electric machine—the first one ever seen in that neighhood; and so of many other things. Let us tell you of a farmer's home we recently visited, where there were a number of boys and girls. The family was pretty well off, and the children better supplied with money and other facilities than are many households, but the example may be imitated in part at least, and you will be surprised at the number of things you can do with small means, when you set about it earnestly.

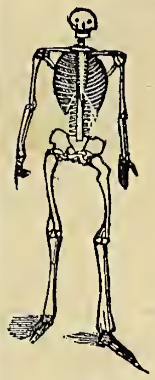
In the family referred to, much of the spare money was used in buying engravings of fine kinds of horses, cattle, sheep, poultry and other animals, and of farm implements, and other machinery. A good library of books of different kinds, supplied reading for nights and rainy days, and the subjects read about, were discussed in conversation. The children, both boys and girls had a chamber room which they called their "office," where they kept their books, papers, pictures, minerals, and other curious things, all arranged in due order.—One young curly-head had a bent for mechanics and was called "Our Mechanic." He adorned his corner of the room with miniature wheel-barrows, horse-rakes, hoes, harrows, and mowing machines. Another was a "Botanist," and had his shelves covered with sections of all kinds of wood growing in the neighborhood, also herbariums of dried plants. Another was called the "Artist," and spent much of his time in drawing pictures of flowers, leaves, fruits, and animals and coloring them from life. His corner was perhaps the most highly embellished of all. Another was fond of speech-making, and often compelled his young auditors to sit in due order around the office, while he harangued them upon the importance of scientific husbandry, of universal education, and the grand prospects of the rising generation!

Doubtless, a critic might see things in this office to smile at; but we were exceedingly pleased with our visit to it, and wish that such offices might be opened in every part of our country. What say the boys?

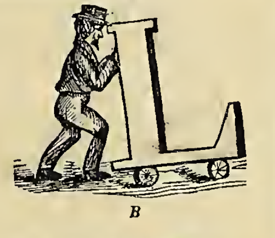
NEW PROBLEMS.—No. 1. A and B bought 80 lbs. of beef at 4 cents per lb., paying for the whole. In dividing it A took 50 lbs. and B 30 lbs., but A's part being better, he is to pay ½ cent per lb. more than B. How much must each pay per lb.?

No. 2. Word Rebus.—Man tea bonnet purchase the plow fuel grow the very person obliged one of the two contain or propel.—The puzzle here is to substitute for the words in this sentence some other words having the same or similar meaning, so that the new sentence shall make an excellent agricultural proverb in rhyme.

No. 3. PUZZLING PICTURES.



A



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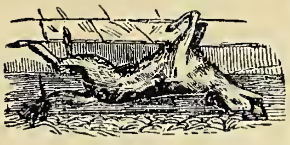


C

A is a General of whom all have heard.

B represents a common and useful farm implement.

C Is very much like a cheese.

See if you can find out how each picture resembles what it is said to represent.

Answer to Agricultural Enigma (in Nov. No.). "*Chinese Sugar Cane.*" Correct solutions received from Alida Gilbert, "Mottville," N. Y., Charles O. Potter, Milton B. Turner, Pearson H. Bristow, Sarah D. Lord, Edwin F. Treat, John G. Storis, Kenner Seaton, W. A. Buckhout, Jas. H. Dony, (thanks for your kind words and good *works*,) Jno. H. Treadwell, Harry La Fetra, Hiram H. Palmer, Matilda F. Van Houten, Mary E. Moore.

The following have found their way into the Labyrinth in the Dec. No.: Jno. A. Bittle, Chas. T. Simpson, Wm. H. Thornton, Wm. E. Jones, Dottie Noble, Wm. G. Kieffer, Peter Bloom, Gilbert Spicer, Theo. T. Kieffe.

Read the Articles on Manures.—We want all our young friends to read the articles on manures, the first one of which will be found in another part of this paper. You will find some interesting things about the growth of plants, and we feel quite sure you will gain much information from those articles, which will be of use to you hereafter.

"How things are Made."

As already announced, we fully expected to begin in this first number of the volume, an interesting series of articles on "How things are Made," but the first article is necessarily delayed. That this delay is not the fault of the Publishing Editor, the following note will show:

To the Editor of the American Agricultuist:

I am sorry that circumstances which I could not control, force me to disappoint you in the article with which I intended this month to begin the promised series on "How things are Made." You may rely that I shall not disappoint you next month, and I beg the readers to pardon a delay, which was wholly my fault, and not yours.

New-York, Dec. 15, 1859. Yours truly, N..

Premiums.

Improvement—Onward—Upward, is our motto. We intend to make each succeeding volume better than its predecessor, *in every respect*. We also desire to secure a wider sphere of usefulness, and to this end, we offer the following *premiums* to those who will assist in the work of extension. In selecting the premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers.—*Each article offered is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be even better than those sold in the market at the prices named, when possible to select better.* Through the kindness of the manufacturers we get these articles for premiums, and for these only, at the bare cost of making, or we could not offer them as we do. The premiums are certainly liberal, when we take into the account the cost and character of the paper, and the low price at which it is furnished.

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.*

☞See remarks following the premiums.

Premium III.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies (that is one extra copy), for the coming year.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid. (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8¼ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles. (Expense after leaving the city to be paid by recipient.)

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines**, new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two year's use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia*, now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Publisher's price, $45.

Premium XIII.—To every person sending 260 *new* subscribers at $1 each, or 330 at the lowest club price (80 cts. each), we will present one of *Allen's Mowing Machines*, with sundry improvements now being added. This is one of the best we have seen in operation. Price $115. Other kinds of Machines of the same price, will be substituted, when specially desired, if satisfactory arrangements can be made with the manufacturers.

Premium XIV.—To every person sending 65 *new* subscribers, at 80 cents each, we will present one of the best *Eagle Plows* (2-horse). Price $11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 *new* subscribers at 80 cents each, we will present the best *Subsoil Plow* (two-horse), price $8; *or* one of the best *Horse Hoes*, price $8; *or* one of the best *Straw and Hay Cutters*, price $8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 *new* subscribers, at 80 cents each, we will present one of the best *Steel-tooth Cultivators.* Price $7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best *Hand Corn Shellers.* Price $6.50.

Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3,) or a *Double mold-board (ridging) Plow.* Price $3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, the publisher will pay premiums in books as follows: Every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from A. O. Moore's Catalogue, (which is advertised on page 316 October Agriculturist) to the amount of 10 cents for every subscriber, sent in at 80 cents each. Persons making up a club for any of the premiums, and getting some names over the required amount, will be entitled to books for the surplus names. Thus, a person getting 55 subscribers can take for 45 names premium VII. or XVII, and also $1 worth of books for the extra 10 names; and so in other cases.

REMARKS.—1. *The above premiums, except No. IV, are all for* NEW SUBSCRIBERS ONLY, *as we can only afford to pay premiums for once on the same subscriber. But* ☞*in making up any premium lists, three renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞*Names need not all be at the same Post Office.*

2. Of course but one premium can be paid on the same name. The canvasser will choose his own premium. Any one striking for a higher premium, and failing to get names enough, can still fall back upon a lower one.

3. Every person collecting names for premiums can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

4 The above premiums are offered for new subscribers for Volume XIX (1860) Canvassers will have at least until Feb. 1 for completing their lists, but the premium will be paid as soon as any list is made up.

* * *

Seeds for Free Distribution in 1860.

Each person whose paid subscription to the American Agriculturist *extends beyond February,* 1860, *will be entitled to select four or five parcels of seeds from the general list given in the next column—if the following conditions be complied with.*

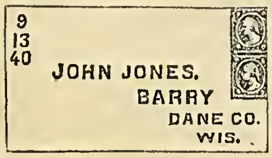
A. It is of absolute importance that the following directions be *strictly* followed, even to the minutest particulars We have **93** distinct varieties of seeds, to be distributed among 70,000 or more persons scattered all over the country, which, at the best, will involve immense labor, and some mistakes must unavoidably occur, unless each subscriber take special pains to facilitate the work.

B. The seeds can be called for at the office, (after Jan. 15) or be sent by express, or in ready prepared envelopes furnished by the subscribers, as described below.

C. Subscribers at different points can estimate whether they can receive their seeds cheapest by Mail to separate individuals, or in a package by Express.

D. If to go by Express, no envelopes will be needed. In that case, simply send us a written list of the names, marking against each name the kinds of seed desired, *using the numbers in the Catalogue.* Keep a copy of the list sent, and give particular directions *on each list,* how the package is to be forwarded, and to whom directed.

E. If to go by *mail,* the applicant will (of course) furnish *prepaid* envelopes, of ordinary size, which should be prepared as in the engraving here given—that is: Put the figures corresponding to the Catalogue plainly on the upper left hand of the envelope, and put all the postage stamps upon the right side of the envelope—one above the other when two or more are needed, as shown in this pattern. This will prevent the seeds being crushed in the stamping process, in the Post-Office. One ordinary envelope will generally hold the amount of seed-packages carried by two or three stamps. ☞ *The amount of stamps can be calculated from the Catalogue. Single 1-cent stamps on letters are of no value, unless there be even threes of them, as letter postage is rated by the half ounce.*



F. Let all letters referring to seeds be as brief as possible, and yet plain. All such communications are referred directly to the clerk superintending that department. It is especially desirable that whatever relates to seeds should be on a *separate* slip of paper. (We shall probably distribute over *three hundred thousand packages,* and a minute's time saved on each of these would amount to 500 working days of 10 hours each—or nearly two years!)

G Canada subscribers will need to substitute 10 cent stamps in all cases where 3-cent stamps are named in the catalogue. When several send together, it will usually be cheaper to receive seeds by Express. (Postage is not necessarily prepaid *here,* on Canada letters)

H. Always put the stamps upon the envelopes, and not drop them loosely into the enclosing letter.

I. It is always better to send envelopes of the ordinary size, and made after what is called the "Government pattern,"—that is, those in which the back comes under the piece lapping over; these seal up more firmly. This point is not essential, however.

J. Usually, the *lighter* the envelope the better, that more seeds may go under the same stamps.

K. Send only the number of stamps required for postage on the seed. We have no seeds of any kind to *sell.*

L. Those forwarding *unpaid* envelopes, will, of course, not be disappointed if they do not return. We offer seeds *free,* but cannot, in addition, afford to pay postage also.

M. All seeds sent by mail are put up at our country residence, and each package is there mailed *direct,* to avoid its being overhauled at the Distributing offices.

N. ☞ We shall take time to mail all the seeds carefully and regularly. This will occupy the entire months of January and February. Those going to distant points, where the seasons are earliest, will be mailed first.

LIST OF SEEDS.

[For Descriptive Notes upon these Seeds see pages 3 and 4 of this month]

Field Seeds.

2—Improved King Philip Corn—Single, double, or triple packages, as may be desired, requiring one, two, or three 3-cent stamps.
3—Stowell's Sweet Corn—Same packages as No. 2.
94—Crystal Flint or Hominy Corn—Same as No. 2.
6—Ashcroft's Swedish Turnip—Half of 3-cent stamp.
7—River's Swedish Stubble Turnip— do. do.
70—Waite's London purple-top Swede Turnip—do.
98—Long Red Mangold Wurtzel—One 3-cent stamp.
101—Improved Long Orange Carrot—½ of a 3-cent stamp.

Vegetable or Garden Seeds.

8—Daniel O'Rourke Pea—Packages same as No. 2.
9—Champion of England Pea—One 3-cent stamp.
99—Prince Albert Pea— do. do.
57—Eugenie Pea— do. do.
58—Napoleon Pea— do. do.
12—Green Kohl Rabi—One-third of a 3-cent stamp
13—Enfield Market Cabbage— do. do.
15—Mammoth Cabbage Lettuce— do. do.
63—London Particular Long Scarlet Radish—do.
64—Extra Red Round Turnip Radish— do.
100—Early Purple Cape Broccoli—do. do.
21—Winter Cherry— do. do.
95—Hubbard Squash— do. do.
102—Mammoth Leghorn Squash—do. do.
108—Mammoth Pumpkin— do. do.
109—Mammoth Red Tomato— do. do.
72—Imported Brussels Sprouts— do. do.
76—Musk Melon— do. do.
77—Water Melon— do. do.
103—Sage— do. do.
104—Thyme— do. do.
105—Chili Red Pepper— do. do.
106—Sweet Marjoram— do. do.
17—Red Strap-Leaf Turnip—One-half of a 3-cent stamp.
74—Solid White Celery— do. do.
75—Green Curled Endive— do. do.
55—White Globe Onion— do do.
71—Long White French Turnip—One 3-cent stamp.
107—Giant Asparagus— do. do.

Flower, Fruit, and Ornamental Seeds.

89—Cotton Plant (2 kinds)—One 3-cent stamp.
90—Norway Spruce Seed—One-half of a 3-cent stamp.
91—Arbor Vitæ Seed— do. do.
112—Broad-Leaved Laurel— do. do.
111—Castor Oil Bean— do. do.
110*—New-Rochelle Blackberry—½ of a 3cent-stamp.

On an average about five of the following 40 varieties will go under a 3-cent stamp.

23—Mignonette.
25—Mixed Nasturtiums.
27—Extra Cockscomb.
29—Double Balsams, mix'd.
30—Tassel Flower.
31—Chinese Pink.
32—Portulaccas, mixed.
33—Cypress Vine.
34—China Asters, mixed.
35—German Asters, mixed.
33—Sweet William.
40—Escholtzia Californica.
42—Foxglove.
47—Morning Glory, mixed.
49—Candytuft.
50—Schizanthus.
51—Phlox Drummondii.
78—Ageratum Mexicanum.
80—Yellow Hawkweed.
81—Canary Bird Flower.
82—Thunbergia.
83—Snap Dragon.
84—African Marigold.
85—Gaillardia, mixed.
86—Euphorbia, mixed.
87—Coreopsis.
113—Double Sun Flower.
114—Mixed Petunia.
115—Mix. Dbl. Hollyhocks
116—Mourning Bride.
117—Mix. Dbl. Wallflower.
118—Bee Larkspur.
119—M'd Chrysanthemums
120—Clematis (Climber,)
121—Trumpet Creeper.
122—M'd Canterbury Bells
123—Gilia nivalis.
124—Whitlavia.
125—Ipomopsis (standing cypress).
126—Long-tubed Centranthus.

Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

Erratum. In the recipe for "Tip Top Cake," on page 23, for *tablespoonful* of cream of tartar read *tea spoonful.*

To Correspondents.—An unusual lot of communications, hints, suggestions, and queries are coming in daily with the letters enclosing subscriptions. We have also several letters received heretofore, but laid aside for consideration. Not unfrequently a query is kept for months in order to make investigations, or to find time and place for a reply. We are thankful for the many favors received, but trust our friends will be patient if we sometimes keep their letters on hand for months, until a seasonable opportunity occurs to introduce them. Very often a studied article is suggested by a dozen or twenty queries, without referring directly to them.

One other item. We try to adapt articles to the season in part, and often prepare items which lay over until their appropriate time. Further, the length of time required to work off the large edition of the inside sheet, which contains most of the illustrations, and must be printed slowly, compels us to prepare all matter for that sheet, and send it to press a month in advance, and articles appropriate to those pages (9 to 24) must be on hand several weeks before they can appear.

Carrots for Horses.—L. B. S., Clarke Co., Va. Carrots are undoubtedly valuable as feed for horses. Some have thought them equal to oats, bushel for bushel; this however, is too high an estimate. Fed with hay occasionally in place of grain, they will be relished, promote digestion, and it is said impart sleekness to the coat of the horse. They are better when cut moderately fine.

Blanketing Horses in the Stable.—M. E. H., Kings Co., N. Y., writes that this practice is injurious to the general health of the horse. It makes him tender and liable to take cold when exposed. It is usually done to improve his coat; this however, should not be done at the expense of his general condition. In extreme cold weather blanketing may be beneficial, though he would prefer having the stable sufficiently warm to dispense with it.

Best Apples in N. Y. Market.—J. A. Glaze, Harrison Co., Ind. From your State, Winter apples chiefly should come to this market. The Newtown Pippin commands the highest price. Parties are now paying $5 and $6 per bbl. for shipping to Europe. Spitzenbergs, R. I. Greenings, and Baldwins follow the Newtown Pippins in price. Large quantities of Russets are sold, but usually at lower prices than the above.

Wild Balsam Apple (*Cucurbitaceæ echinocystis*).—F. R. Leonard, Lancaster Co, Pa.—The specimen received. We may plant a few of the seeds, not having grown any of them for many years. We know of no use for them save their medicinal qualities. Their odd appearance and climbing habit constitute their chief interest.

Size of Trees for Transplanting.—E. J. Wells, Wyoming Co., Pa It is advisable not to buy trees of more than three or four years' growth. Trees ten or twelve feet high may look more promising when first set out, but those of five to six feet will in a few years outstrip the former, and if properly cared for be far superior. The probability of loss by removing larger trees is also much greater.

Guano Water for House Plants.—Mr. Smith, Bristol County, Mass. Guano water is often used to enrich the soil of potted plants. It must not be too strong. Half a pound of guano dissolved in a large pailful of water, is fully strong enough.

Feeding Bees.—A. R Potter, of R. I., referring to the advantages of movable frame hives, speaks strongly of their convenience for feeding bees without attracting robbers from other swarms, as a single frame of comb can at any time be transferred from a hive having a surplus of honey to one deficient.

Profits of Bee Keeping.—J. W. Shaw, Montgomery Co., Md., inquires for information as to the profits of bee keeping. We can not go into the details now, the subject was fully treated in a former number, (Vol.

XVI, p. 83, April 1857). The article referred to, as well as others in that and the succeeding volume were prepared by a practical bee-keeper who had no ax to grind, and may be studied with profit by all interested in the subject.

Milk Spoiled by Turnips.—G. Elston, Orange Co., N. Y. The unpleasant taste imparted to milk may be lessened by feeding the turnips immediately after milking. The turnip flavor seems to escape from the milk before it is drawn twelve hours afterwards. If turnips are fed in large quantity, we know of no way to prevent the milk being flavored with them.

Keeping Potatoes.—A. Bakewell, Sullivan Co., Pa. Potatoes should be kept in a dry cool place, away from the light, and where there is good ventilation. Warmth and moisture increase their liability to rot, and also to germinate in Spring.

Sulphur for Sheep Ticks. W. Wagman, Saratoga Co., New York. We doubt the efficacy of sulphur fed to sheep to expel ticks. Dipping or washing the animals in a decoction of tobacco, and rubbing their skins with lard and Scotch snuff has proved beneficial.

From Good Old "Berks."—Among many kind remembrances received from subscribers, we must acknowledge a box that recently came from Messrs. Nicholas Schaeffer and John Shadel, of Berks County, Pa., freight paid, and filled with products from their own farms. Included in its contents were great pound Apples ("Fallawaters"), and excellent specimens of the "Krozier" apple; also a fine lot of two varieties of sweet potatoes, those of the Nansemond variety weighing nearly 1¼ lbs, each, and first rate on the table. But aside from the contents of the box—that, like the great clusters of grapes in olden time, indicated the goodness of the land whence they were brought—the kind expressions of regard and appreciation in the accompanying letter, were gratifying indeed, for they were from readers personally unknown, and those, too, who had no "ax to grind." In their letter they say: "...We send you this box as a little return for the good things we have received for ourselves and our families from the Agriculturist. We feel at home with the paper and shall stand by it, and feel interested in its success...."

The "Terra Culture" Man has been holding forth in these parts, lately, and by dint of advertisements appearing as editorials in one or two journals, has induced a few foolish, unread people, to hear him at $2 per head. We hardly think it worth while to again discuss this humbug, which has more lives than ten cats.

Campbell's Agriculture.—This is a new work on Agriculture, partly scientific, and partly practical, by Prof. J. L. Campbell, of Washington College, Lexington, Va. We have read over several chapters here and there through the work, as we have had time during the past month, and, judging from what we have read, it appears to be an excellent book. It gives many of the first principles of chemistry in a concise form—rather too concise—yet in a pleasing and attractive style. We should disagree with the author in some of his teachings in regard to the chemistry of manures, and upon some of the practical recommendations, yet, everything considered, the book is one of the best, if not the best yet published, and we recommend it as worthy a place in the hands of every farmer. The practical teachings are more especially adapted to the crops grown in the latitude of Virginia, but these are in part useful elsewhere, and the principles are of general application. The price of the book is $1, we believe. It will probably soon be advertised by the publishers. We shall take occasion to get a few copies for such of our readers as desire them, and can obtain them most conveniently at our office, or by mail—though with this, as with all other books, we prefer that every one should buy them of the regular dealers when they can do so.

Knickerbocker Magazine.—We have received from the publishers a copy of a large beautiful steel engraving, called "Merry making in the Olden Time." This has been prepared exclusively as a present to the full price subscribers to that old and popular magazine, which under the auspices of our energetic friend, Dr. Noyes, is constantly improving.

Wait patiently for the Seeds.

Large numbers of envelopes for seeds are already received, and some persons urge us to send them on at once. We can not comply with this request. The seeds are being collected from different parts of the country—many from Europe—and it will be utterly impossible to get them all together, and properly arranged and put up, so as to begin the distribution, until about the second week in January. It will require a large force for several weeks to send all. But all will be got off in time to be used in different localities, if the envelopes are received soon.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Monday Evening, Dec. 19, 1859.

The closing of the State canals, and the partial interruption of lake and river navigation, have been the only circumstances specially affecting the markets the past month. Yet, their influence, this season, has been unusually limited — having occasioned no very serious changes in the course of trade. The receipts and sales of Flour have been less extensive, during the past four weeks, than that noticed in our last Review. Early in the month the demand was good and general—for home use, shipment, and on speculation, and prices improved. But within a week or two the inquiry has materially diminished. Holders have manifested more eagerness to sell, and the tendency of the market has been downward. There is little disposition to purchase freely, as, with the heavy available supply now here, no serious difficulty in having orders executed is anticipated, and a reduction in prices is looked for with some degree of confidence. The principal demand is now for lots wanted by the regular home trade. Shippers and speculators are moving cautiously. The recent accounts from England have been less encouraging. The tendency of these, in this market, has been to depress business. The stock of Flour on hand here is variously estimated at from 800 000 to 1,400,000 bbls. The most general estimates make the supply somewhat over 1,000,000 bbls..... IN WHEAT, as in Flour, the movements have been restricted, and the course of the market has been similar. Toward the close, buyers are very reluctant to purchase, especially for shipment or on speculation, unless at lower rates than the principal holders are disposed to accept. Hence the market closes tamely and irregularly, the tendency being decidedly downward. The available supply of Wheat is estimated at from 1,750,000 to 2,500,000 bushels. It is, however, generally believed that the actual stock, in this city and vicinity, is not much, if any, over 2,000,000 bushels. This is considered an ample provision for the Winter and early Spring trade, and sufficient to prevent any important changes in prices upward.....CORN has been offered and purchased more freely. Prices have fluctuated considerably. Recently the tendency has been upward. Sound, desirable lots of Corn are scarce. The market is almost bare of mixed Western.....RYE has been in fair request, and it has advanced.....A good inquiry has been experienced for BARLEY, at essentially unaltered quotations....OATS have been briskly sought after, at improved prices..... COTTON has attracted more attention, but it has declined. Crop estimates average 4,250,000 bales as the probable yield. Receipts are already a little over 250,000 bales in excess of those of last year.....Hay, Rice, and Tobacco have been in fair demand. Prices of Hay have favored sellers....Hemp, Hops, and Seeds have been less active....Wool has attracted less attention, yet it has been stiffly held....Provisions and Groceries have been more sought after. Prices of the leading kinds exhibit some changes favorable to sellers.....The transactions in most other kinds of Produce have been moderate.

CURRENT WHOLESALE PRICES.

	Nov. 19.	Dec. 19.
FLOUR—Superf to Extra State	$4 90 @ 5 15	$4 95 @ 5 25
Common Western	4 95 @ 5 00	4 90 @ 5 10
Extra Western	5 05 @ 7 50	5 15 @ 7 00
Fancy to Extra Genesee	5 15 @ 7 00	5 30 @ 7 00
Super. to Extra Southern	5 40 @ 7 25	5 55 @ 7 25
RYE FLOUR—Fine and Super	3 60 @ 4 35	3 66 @ 4 40
CORN MEAL	4 00 @ 4 50	3 80 @ 4 25
WHEAT—Canada White	1 36 @ 1 42	1 35 @ 1 40
Western White	1 35 @ 1 47½	1 37½ @ 1 50
Southern White	1 37½ @ 1 50	1 40 @ 1 55
All kinds of Red	1 08 @ 1 35	1 14 @ 1 35
CORN—Yellow	1 00 @ 1 02	98 @ 1 00
White	1 00 @ 1 01	96 @ 98
Mixed	None offering.	@ 1 00
OATS—Western	44½ @ 45½	46½ @ 47½
State	44½ @ 45½	46½ @ 47½
Southern	38 @ 42	42 @ 44
RYE	85 @ 86½	88 @ 90
BARLEY	75 @ 80	75 @ 88
White Beans	1 00 @ 1 10	1 00 @ 1 30
HAY, in bales, per 100 lbs	75 @ 1 00	85 @ 1 00
COTTON—Middlings, per lb	11½ @ 11¾	11¼ @ 11⅝
RICE, per 100 lbs	3 50 @ 4 50	3 50 @ 4 37½
HOPS, crop of 1859 per lb	12 @ 18	12 @ 18
PORK—Mess. per bbl	15 00 @ 15 12½	@ 16 00
Prime. old, per bbl	10 50 @ 10 62½	11 37 @ 11 50
BEEF—Repacked Mess	9 00 @ 10 00	9 00 @ 9 75
Country mess	5 00 @ 5 37½	5 12½ @ 5 50
HOGS, Dressed corn, per lb	7 @ 7¾	7 @ 7½
Lard, in bbls. per lb	10½ @ 11	10¾ @ 11
BUTTER—Western, per lb	11½ @ 18	11½ @ 18
State, per lb	14 @ 21	14 @ 21
CHEESE, per lb	8 @ 11	8 @ 11
EGGS—Fresh, per dozen	19 @ 20	20 @ 21
Limed— " "	16 @ 17	16 @ 17
POULTRY—Fowls, per lb	8 @ 10	8 @ 10
Geese, per lb	8 @ 10	8 @ 10
Ducks, per lb	8 @ 12	10 @ 12
Turkeys, per lb	9 @ 12	10 @ 11
Venison, per lb	10 @ 12	8 @ 11
FEATHERS, Live Geese per lb	45 @ 53	43 @ 52
SEED—Clover, per lb	8 @ 8¾	8 @ 8⅝
Timothy, per bushel	2 12½ @ 2 45	2 00 @ 2 62½
SUGAR, Brown, per lb	6 @ 8½	6¼ @ 8¾
MOLASSES, New-Orleans, pr gl	39 @ 45	50 @ 51
COFFEE, Rio, per lb	10¾ @ 13	10¾ @ 12¾
TOBACCO—Kentucky, &c. pr lb	4 @ 12	4½ @ 12
Seed Leaf, per lb	6 @ 25	6 @ 25
WOOL—Domestic fleece, per lb.	37½ @ 62½	37½ @ 62½
Domestic, pulled, per lb.	30 @ 53	30 @ 52
HEMP—Undr'd Amer'n pr ton.	120 @ 145	125 @ 150
Dressed American, per ton	170 @ 200	165 @ 200
TALLOW, per lb.	11 @	10½ @ 10¾
OIL CAKE, per ton	28 00 @ 35 50	28 00 @ 35 00
APPLES—Dried, Per lb	6 @ 7½	6 @ 7½
Dried Peaches—pr lb. South'n	10 @ 16	10 @ 17
POTATOES—Mercers, p. bbl	1 50 @ 1 75	1 50 @ 2 00
Peach Blows, per bbl	1 00 @ 1 50	1 25 @ 1 75
Sweet, Virginia, per bbl	1 25 @ 1 75	1 50 @ 1 75
Delaware, per bbl	2 00 @ 2 50	2 50 @ 2 75
Cabbages, per 100	2 50 @ 4 50	2 50 @ 3 50
Onions, Red, per bbl	1 75 @ 1 87	1 75 @ 2 00
White and Yellow, per bush	1 75 @ 2 25	1 75 @ 2 50
Squashes, Marrow, p. 100		2 50 @ 5 00
Turnips, Rutabaga, per bbl	88 @	88
APPLES, Winter, per bbl	2 50 @ 5 00	2 25 @ 4 00
Cranberries, per bbl	12 00 @ 15 00	15 00 @ 17 00
Hickory Nuts, per bush	1 12 @ 1 50	1 00 @ 1 25

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley	Oats
24 bus days *this* mon	523,050	533,347	204,776	43,161	413,577	815,000
27 bus. ds, *last* mon	734,590	1,405,650	160,700	116,500	552,150	597,900

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
24 business days *this* mon.	450,479	571,150	386,700	67,400	362,100
27 business days *last* mon.,	620,375	968,500	282,000	135,950	457,750

Breadstuffs exported from N. Y., from Jan. 1 to Dec. 13

	1858.	1859.
Wheat Flour, bbls	1,351,351	836,970
Rye Flour, bbls	4,525	5,608
Corn Meal, bbls	63,354	75,670
Wheat, bush	3,285,861	202,026
Corn, bush	1,639,304	179,929
Rye, bush	12,487	——

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been pretty well supplied during the past month, but not so much overstocked as during the Fall. For the four weeks ending Dec. 13, the beeves brought to this city for slaughter numbered 17,453, or an average of 4,363 ℘ week. The general quality has much improved of late, and prices have advanced about 1c. ℘ lb., dressed weight, during the month. At the last general market, Dec. 13th, prices ranged: 10½c @11c. for premiums; 10c.@10½c. for prime beef; 8½c.@9½c. for medium; and for poor qualities 6½c.@7½c.; with a general average of 8½c. for all sales.

VEAL CALVES.—Receipts for the past four weeks number 2,249, which is quite a falling off from last month. Prices remain about the same, being 6½c.@7½c. ℘ lb., live weight, for the best calves, and 5c.@6c. for common veal.

SHEEP AND LAMBS.—These come in less freely, and command better prices. Receipts for the past four weeks, 52,227, or an average of 13,056 ℘ week. They are still sold by the head, without weighing, at prices equivalent to about 5c.@5½c. ℘ lb., live weight, for very fat sheep; 4c.@4½c. for medium; and 3c.@3½c. for very common animals. Some very fat wethers, recently brought in for Christmas, sold for $16 each.

HOGS.—Receipts have been large, footing up 60,359 for the past month, or an average of 15,090 ℘ week. Besides these, many dressed hogs are brought in by wagons, railroads and boats. Prices are a shade higher than a month ago, being 5¾c.@6¼c ℘ lb., live weight, for corn fed hogs, and 5¼c.@5½c. for still fed animals.

The Weather during the past four weeks has generally been fine for a Winter month, with very little snow in this latitude, and a moderate amount of cold weather. Farmers have had ample opportunity to prepare for Winter, and the mild weather has favored those having short fodder crops. OUR DAILY NOTES, condensed, read thus: *November* 19, rain A. M., clear and fine P. M.—20, 21 fine—22 rain A. M., clear P. M.—23 to 30 mostly clear, and fine Autumn weather. *December* 1, 2 clear and mild—3 cool and cloudy, with rain, sleet, and snow at night—4 cold rain—5, 6 heavy fogs and drizzling rain—7 rainy day, ending in snow at night—8 clear and cold, with a little snow upon the ground—9 clear and the coldest day of the season, mercury 16°—10 clear and cold—11, 12, 13 cool—14 light snow and cold—15 clear and moderate, about two inches of snow upon the ground—16 clear and cool, thermometer 16°—17 mild, but cloudy, and a storm threatening.

The Advertisements Not Endorsed.

To correct an erroneous conclusion drawn from our recent remarks on advertising we have to say: So long as our business columns are open to the public at all, we can not well avoid admitting legitimate advertisements of some manures, implements, books, periodicals, etc., which we do not approve. Our directions to those in charge of that department, are: to exclude deceptive advertisements, that is, those which do not come out and tell just what is offered to the public so plainly that nobody shall be deceived; also to exclude those persons who are reported not to perform what they promise to the public. We wish it distinctly understood, however, that we do not endorse, or take any responsibility for anything in the advertising pages, unless it be specially referred to in the reading columns.

Business Notices.

☞ *Sixty Cents a Line of Space.*

GROVER & BAKER'S
CELEBRATED NOISELESS
FAMILY SEWING MACHINES,

New Styles at Reduced Prices.

No. 495 Broadway, New-York; No. 18 Summer st., Boston; No. 730 Chestnut st., Philadelphia; No. 181 Baltimore st., Baltimore; No. 58 West Fourth st., Cincinnati. *Agencies in all the principal cities and towns in the United States.*

"Wheeler & Wilson's, Singer's, and Grover & Baker's Machines all work under Howe's patent, and are, so far, the best machines made. * * *For our own family use we became fully satisfied that Grover & Baker's is the best and we accordingly purchased it."—American Agriculturist*

☞ SEND FOR A CIRCULAR. ☜

To Advertisers—Advance in Terms.

Attention is directed to the terms of advertising, which will hereafter be a little more per line than formerly. The new terms, however, are in reality not so high as when the previous rates were established, owing to the large increase in our circulation.

But our charges will still be *lower* than those of any other journal we believe, and considerably below the average. Thus: Our new terms are but little more than *half a cent a line for each thousand subscribers.* By the column the charge is less than ½ cent per 1000. The comparative cheapness of these terms will be appreciated when we state as a matter of fact that, generally the charges by the agricultural periodicals range from 2 to 5 cents per line for each 1000 subscribers. In a few instances they are lower, and in some cases higher—in one agricultural monthly the regular charge is over 10 cents per line per 1000.

We make these comparisons, not invidiously, but in reply to a few persons who have, without calculation doubtless, complained that even our former terms were higher than others.

The fact that the *Agriculturist* is issued but once a month, and is in a form, and of a character to be preserved and often referred to, will of course be appreciated.

We desire but a limited number of advertisements, and exclude all patent medicines, and things of a deceptive character.

The average **circulation** of the *Agriculturist* for six months past has been somewhat over **Fifty Thousand Copies** per month. This is believed to be a larger circulation than that of any other Agricultural or Horticultural Journal in the world. Very large accessions of new subscribers are daily received.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.

Thirty-three cents per line of *space* for each insertion, (or three lines for $1)
One whole column (145 lines) or more—$40 per column.
☞ Business Notices *Sixty* cents per line.

FOR THE GERMAN EDITION ONLY.

Ten cents per line of *space* for each insertion.
One whole column (130 lines), or more, $10 per column.
☞ Business Notices *twenty* cents per line.

FOR BOTH EDITIONS—ENGLISH AND GERMAN.

Forty cents per line; $45 per column.
☞ Business Notices *Sixty-five* cents per line.

☞ On Advertisements to stand three months or more, a discount of 5 per cent will be made from the above terms for each three months of the whole term paid for in advance. Thus: 5 per cent off for 3 months: 10 per cent off for 6 months; 15 per cent off for 9 months; and 20 per cent off for 12 months.

☞ Laborers, or those seeking employment, *one half* of the above terms.

FARMER WANTED.—A man and his wife to take charge of a *Farm in New-Jersey*, near *New-York.*—One who understands his business thoroughly, and his references for honesty, industry and economy must be undoubted. Address "*Box 362 New York Post Office,*" giving applicant's address.

Memorial of Washington Irving.
KNICKERBOCKER MAGAZINE.

The January Knickerbocker—opening the 55th vol.—contains a splendid steel-plate engraving of WASHINGTON IRVING, an autograph Christmas letter in lithograph; SUNNYSIDE illustrated, with ORIGINAL LETTERS, ANECDOTES, REMINISCENCES, &c., by several distinguished writers; STORIES and PICTURES of the HUDSON; THE BATTLE OF FORT MOULTRIE by Hon. George Bancroft; THE PHYSICAL DECLINE OF AMERICAN WOMEN, a powerful and searching article that should be read by every man and woman in the country; a Christmas Story, &c., &c.

TERMS—25 cents per copy; for sale everywhere, or sent to any address on receipt of the amount. To every $3 subscriber to the KNICKERBOCKER for 1860, inclosing 12 cents extra in stamps for postage, will be given a copy of the new and splendid line-engraving of

MERRY-MAKING IN THE OLDEN TIME.

Six copies of each for five subscriptions ($15 60): ten copies for eight subscriptions, ($25.00).

☞ KNICKERBOCKER and AMERICAN AGRICULTURIST for 1860 only $3.00, with the Engraving only $4.00. All of them GRATIS for a club of five subscribers, $20.00.

AGENTS ARE WANTED in every part of the country, to canvass for the Magazine and Engraving. Terms unusually liberal.

JOHN A. GRAY, PUBLISHER,
16 & 18 Jacob st., New-York.

CHINESE GEESE.—We can spare one pair Brown and three pair White Swan Geese; Rouen, Aylesbury, and Java Ducks Apply to C. N. BEMENT,
Poughkeepsie, N. Y.

FEMALE ALDERNEYS, Ayreshires, and DEVONS, thorough bred. For sale by
ALFRED M. TREDWELL, 45 Fulton-st., N. Y.

FANCY FOWLS.—A few pairs of Golden and Silver-spangled Hamburg, Golden and Silver-spangled Bantams, Smooth-legged white and black African do., Crested Hamburg, Black Java and Albinos, Grey and Speckled Dorkings Dominique fowls. Apply to C. N. BEMENT,
Poughkeepsie, N. Y.

THE
AMERICAN PUMP.
Patented, April 5, 1859.
WITHOUT SUCTION, WITHOUT PACKING.

This is a *Double Acting Force Pump*, with but one bore and one Piston, worked by a tee piece, having as much leverage and less friction in its working than any other pump heretofore invented.

The working parts all stand *under the water*, as does the air chamber, beyond the reach of careless or malicious interference or frost; there is no loss of water and no loss of labor in *any depth*—a constant flow of water is kept up. The different sizes five in all, work in diameters of from 14 to 24 inches, and cost $15, $20, $25, $40 and $60 each, are worked by hand, horse, water, wind or steam; adapted to cisterns, wells, tanks, machinery, engines, mines, rail-roads, docks, forcing water under or above ground to great heights and distances; discharges at various points—throws by hose and pipe, 30 to 40 feet. It has now been in *successful operation* for 8 months, in every depth from 8 to 100 feet, and for nearly every conceivable purpose, in twenty-four States of the Union, commencing at Maine and extending to the Rio Grande, and in New Brunswick and Cuba.

"This pump needs no priming to obtain water The arrangement and operation are very simple, and easily understood."—*Life Illustrated, N. Y.*

"This is a new Pump which is offered for public favor. Those, who have used it speak highly of it."—*N. Y. Observer.*

"The piston discharges at both ends into the air-chamber, causing a regular flow of water at the discharge pipe at top. If preferred, every part can be galvanized, except the piston, which keeps itself clean, and is proof against rust."—*N. Y. Evangelist.*

"This is a new invention, being exceedingly simple rendering the labor of working it, on account of the very small amount of friction in its working parts, very trifling in comparison to other Pumps of a similar nature."—*N. Y. Christian Advocate and Journal*

"As a specimen of the ease and efficiency with which this Pump works, we can state, that one man, working regularly, forced water from this Pump, a distance of 540 feet, being 97 feet perpendicular height."—*Scientific American, N. Y.*

"There are no suction valves nor complicated fittings; neither chains, pulleys, nor guide rods. It is easily arranged for any motive power, and lifts water to any desirable height without any waste of force. A woman or boy can work it with ease to raise water 50 feet, and a man can raise it 100 feet."—*The Independent, N. Y.*

"One of these Pumps now in use in this vicinity, enables us to state that full confidence can be placed in the statement contained in the advertisment."—*Presbyterian Banner and Advocate, Pittsburg, Pa.*

"The Pomp we personally tested, was conected with a pipe 65 feet high, and it required but a very slight exertion with one hand to deliver a stream of water at this height at the rate of eight or ten gallons per minute A small boy could have done it with ease,"—*The American Mining Chronicle, N. Y.*

"We got one of them, which we have put into operation on our farm, and like it so far very much. It brings up a *continuous* stream of water, with little or no labor to the person working it."—*The Southern Planter. Richmond, Va.*

"Having had considerable practical experience in the use of machinery of this character, after testing this with our own hands, we have no hesitation in according to it our unqualified favor. In truth, it surpasses everything for the purpose we have before examined."—*U. S. Journal.*

"One of our newest and most useful inventions of the day. It is without packing and without suction, is exceedingly simple in its construction, and, at the same time, possesses all the requirements of a good Pump, and can be used either as a well, a cistern, or a ship's Pump"—*New York Express.*

"A boy of ten years of age can work it at 50 feet, and a man at a hundred feet. We have seen one in operation, and consequently speak from personal knowledge. They are adapted to almost every purpose where a Pump is required."—*New York Day Book.*

"Having seen one of your Pumps in operation, we consider it the best we have ever seen for general use; it is simple, and can be operated with less power than any Pump we have ever known of the same capacity."—*Galveston News, Texas.*

"At the late State Fair in this city, 'The American Pump took the Premium, and met the approbation of all who examined it."—*Raleigh (N. C.) Register.*

"We speak from *personal knowledge*, and say, that of all the Pumps we ever saw, we newer saw one at all comparable to this."—*St. Louis (Mo) Ch. Advocate.*

DOBB'S FERRY, *November*, 7, 1859.

J. M. EDNEY, Esq —Having one of your newly invented No. 1 Pumps erected on my employers' grounds, at Nints, near Dobb's Ferry, in a well of 67 feet, and having given it several trials of near an hour each, I find it to raise from 8 to 10 gallons per minute, with ease, and to my satisfaction. (The Pump has been in constant use for seven months, and is now worked by a windmill.) JOHN IRVING,
For F. COTTENET, of Cottenet & Atherton, N. Y.

NEW YORK. *November* 7, 1859.

J. M. EDNEY, Esq —Having had one of your No. 3 Pumps in successful operation for several months, on my premises at Greenwich, Conn., which forces the water up a hill to the distance of 540 feet, and to an elevation of 97 feet, I am enabled to state that it has more than met my expectations, and has not only given satisfaction, but evidence of superior capability strength, and durability. ROBERT M. BRUCE.

CORNWALL, N. Y, *June* 17, 1859.

Dear Sir—The Pump for my well, of 46 feet, raises a good stream of water and a constant flow—works easily, and gives me *perfect satisfaction.* The one for my cistern under my piazza, forcing water into my tower. 40 feet, anwers the purpose so much better than anything I could find—gives me *good satisfaction.*

Respectfully yours,
JAMES MARSH.

NEW HANEN, CONN., *May* 16, 1859.

Dear Sir—We have had your Pump put in on *trial*—the *water comes*—find within check for $39 for the same. (Depth 39 feet.)
Respectfully, F. S. & J. PARKER, (Paper Mills.)

INSTITUTION FOR THE DEAF AND DUMB,
WASHINGTON HEIGHTS, Nov. 22nd, 1859.

J. M. EDNEY Esq.—Having had occasion, nearly three months ago, for a Pump differing somewhat from those in ordinary use, after inspecting many kinds I met with your circular, and soon decided that your Pump was just the thing we required. I ordered a Number 2 Pump, the cylinder and piston brass, the remainder of galvanized iron. It was well fitted up, works easily and successfully, and has thus far required no readjustment or attention whatever. Indeed, I regard it as the most durable Pump I have seen, and possessing all the merits you claim for it. E. B. PEET.

J. H. Nevin, of Pittsburg, Pa., (well of 67 feet), says March 11—"I am quite well pleased with the Pump; it works very handsomely indeed. Find check within for $40, and send me another Pump *just like mine.*"

Messrs. Rhodes & Deats, of San Antonio, Texas, Nov. 5th, say—"We think your Pumps will sell well here, and supersede all other highly *prized* Pumps. Please send us six No, 2 Pumps, with 30 feet of pipe and rods each."

D. S. H. Darst, of Gonzales. Texas, October 28th, says: "Find drawings within for a Pump for mining purposes (perpendicular, 130 feet). Inclosed find draft for $230. pay for the above Pump, and send the remainder to me in No. 1 Pumps with extra pipe."

A Working Model and Pumps always to be seen on application at the office. Complete drawings, prices, and particulars in detail sent free of postage. Address,

JAMES M. EDNEY,
147 Chambers st., N. Y.

THE PEOPLE'S MILL.
SANDFORD'S PATENT.

A FARM MILL, Portable. Simple, Compact, and made on an entirely new principle, with plates having a reciprocating and oscilating, instead of a *rotary* motion, with all the power applied within one inch of the center of the shaft, and one that has been fully tested and improved by two years' experisnce, is now offered to the public. Every Mill is tested, and no one is sent out unless it will grind a bushel of hard Corn fine enough for stock feed in *eight minutes*; many kinds of Grain it will grind much faster.

It is the PREMIUM MILL for the People, and obtained the SILVER MEDAL at the late Exhibition at the American Institute in the City of New-York.

THE *People's Mill* can be put into any saw mill.
THE *People's Mill* is the *cheapest* Mill ever offered to the public.
THE *People's Mill* is the *simplest* Mill ever made.
THE *People's Mill* is the *most durable* in use.
THE *People's Mill* has the most grinding surface of any portable mill.
THE *People's Mill* requires less power than any other doing the same amount of work.
THE *People's Mill* requires less speed than any other mill.
THE *People's Mill* is adapted to any kind of power.
THE *People's Mill* is not a rotary mill.
THE *People's Mill* obviates all the objections to the cast-iron *rotary* mill.
THE *People's Mill* will grind all kinds of grain, coarse or fine, for feed.
THE *People's Mill* will grind Plaster, Bones, Salt, all kinds of Grain, Malt, Peas, Beans, Spices, &c., &c.
THE *People's Mill* largest size, requires about two-horse power.
THE *People's Mill* only requires about two hundred and fifty revolutions per minute.
THE *People's Mill* largest size, will grind from one hundred and fifty to two hundred bushels of grain in 24 hours.
THE *People's Mill* may be renewed at the cost of the plates, which will be furnished at fifty cents each.

The plates are made of hard iron, dressed or grooved on both sides, and the reciprocating motion keeps the grinders sharp. There is no *bolt* to it, which, we think, experience has proved of no use on portable mills. The common sieve is sufficient for all ordinary family purposes. Three sizes—

No. 1, a Hand Mill—price $20, No. 2 $30, No. 3 $40.

LIBERAL DISCOUNT MADE TO DEALERS.

A Mill may be seen in constant use at my shop, also at No 17 Spruce-st., New-York, a few doors below the Tribune Building I will fill all orders for belting at cost.

Address R. L. HOWARD, Buffalo, N. Y.

I also manufacture the Improved Ketchum Grass and Grain Harvester.

SCHOOL TEACHERS WANTED.—The subscriber wishes to engage the services of a few School Teachers to act as traveling Agents in introducing his publications. For particulars apply immediately to
HENRY BILL, Publisher, Norwich, Conn.

PROFITABLE Employment may be had by addressing (post-paid) R SEARS 181 William-st, N, Y

GRANVILLE (OHIO) FEMALE ACADEMY. $144 pays all expenses for one year for board, washing, lights, fuel, and furnished room. Spring session begins Feb. 2d, 1860. Facilities for a thorough education, and for ornamental branches are unsurpassed. Granville, Licking Co., Ohio. W. P. KERR, Principal.

Seeds of Evergreen Trees and Shrubs.

We are now in receipt of several leading varieties of TREE and SHRUB SEEDS in advance of our extensive assortment of over 300 sorts, a Catalogue of which will be published on the first of February.

NORWAY SPRUCE SEED	75	cts per lb
EUROPEAN SILVER FIR	4.00	"
BLACK AUSTRIAN PINE	3.00	"
PITCH PINE	3.00	"
WEYMOUTH PINE	3.00	"
EUROPEAN LARCH	2.00	"
CHINESE ARBOR VITÆ	2.50	"
AMERICAN DO. (clean seed)	6.00	"
HEMLOCK SPRUCE (clean seed)	6.00	"
SEA-SIDE PINE	1.00	"
BALSAM FIR	3.00	"
WHITE AND BLACK BIRCH, each	2 00	"
YELLOW AND WHITE ASH	1.00	"
CEDAR OF LEBANON CONES, each	20	cts.
SCOTCH FIR	1.50	per lb.
HONEY LOCUST FOR HEDGES	75	"
YELLOW TIMBER LOCUST	75	"
BUCKTHORN SEED	1 00	"

ALSO

APPLE SEED, 40 cts. per qt., $8 per bushel.
PEAR SEED (Imported) $2 50 per lb
PEAR SEED (American) $3.50 per lb.
BLACK MAZZARD CHERRY PITS, 50 cts. p. qt. $10 p. bushel.
CONNECTICUT SEED LEAF TOBACCO $3.50 per lb.
EARLY SOVEREIGN POTATOES, the earliest and best variety in Cultivation $4.50 per Barrel.
WHITE CLOVER, LUCERNE, ENGLISH RYE GRASS. BLUE GRASS, ORCHARD GRASS, and all and every variety of *Seeds* for the Farm, Plantation, and Garden.

J. M. THORBURN & CO, 15 John-st, N. Y.

LARGE STANDARD PEAR TREES FOR SALE.

At our Nursery we have a quantity of extra large Pear Trees of the most approved kinds, very thrifty, and all of them have been trimmed and transplanted, and therefore have splendid tops and roots. We also have a quantity of Apple, Cherry and Plum Trees, and a variety of other trees, vines, Shrubs, &c., (as above,) for sale by WICKHAM & BLOODGOOD,
Tioga, Tioga Co, Penn.

TO WHOLESALE DEALERS IN GARDEN, FIELD, and GRASS SEEDS.—I have taken the greatest care in raising and selecting a large and pure stock of every variety of Seeds required by the Gardener, Farmer, and Planter, and purchasers may depend on their being fresh and true to name.

Sales will be made in bulk, by the ounce, pound, quart, bushel, or in papers distinctly labelled.

My Seed List contains all the old varieties, and many new kinds, all of the very best quality, and chiefly raised for me.

FRUIT SEEDS—Apple, Pear, Quince, Plum, Apricot, Cherry, Currant, Gooseberry, Raspberry, Strawberry, Peach, &c.

HEDGES—Honey Locust, Yellow Locust, Buckthorn, Osage Orange, Arbor Vitæ, &c.

DUTCH BULBOUS ROOTS—Of all kinds furnished.

FRUIT, ORNAMENTAL TREES and SHRUBS procured to order, (true to kind) from the most reliable sources, and forwarded, carefully packed, to any part of the country.

BOOKS—All works furnished at publisher's prices.

My prices are as low as any others for the same quality of seeds. Send for a price list.

Orders by mail will be attended to with exactness and promptitude. R. L. ALLEN, 191 Water-st, New-York.

IONA ISLAND VINES.

A new edition of Descriptive Catalogue is now ready, and will be sent to applicants sending a three cent stamp. It contains additional information relative to planting, training, and the management of vines, with a full and accurate description of all the valuable varieties with which I am acquainted that are now in market.

My facilities for propagating (including nearly an acre of glass) are extensive, and in consequence my plants generally, and especially the Delaware Vines, are this season of much better quality than I have before been able to offer.

Of Large Diana Vines my stock is limited, but of surpassing excellence. Of Anna, the stock is also small, but plants of best quality; chiefly LARGE LAYERS ready for bearing.

For prices and full particulars see Catalogue.

Of Delaware Vines, besides very large Layers, I have a good stock of exceedingly vigorous plants grown in the open air, for such as may prefer them. Of these the wood and roots are very strong, and will be *thoroughly ripened early in the season.*

I would recommend the Herbemont as a most delicious grape, and a great acquisition to all gardens having a sheltered exposure not more than one degree north of latitude of New-York. A small stock of very large layers ready for bearing now for the first time offered.

Concord, a small stock of remarkably large layers for immediate bearing, as well as small vines. A good stock and very large plants of Rebecca. Canby's August, which is synonymous with Cape, Alexander, York Madeira, Hyde's Eliza, Schuylkill Muscadel, Baldwin's Early, etc., a few layers. Of the following a very limited supply:

Allen's Hybrid, (a white grape equal to Chasselas,) Logan, To Kalon, (synonymous with Wyman, etc.,) Cassidy, Louisa, Elsingburg, Clara, Raabe, Lenoir, U. Village, Early Hudson, Garrigue's, Hartford Prolific, Emily.

Foreign Vines, a good stock—plants vigorous.

Downing's Everbearing Mulberry, a small stock of superior plants, 1 and 2 years old.

Newman's Thornless Blackberry, (best garden variety) a few hundred.

Wholesale Catalogue ready. C. W. GRANT,
Iona Island, near Peekskill, Westchester Co., N. Y.

HUNGARIAN GRAPE SLIPS.—JOHN KOLBER'S second importation of Hungarian Grape Slips, consisting of 30,000 hardy shoots, embracing a selection of *twenty-one of the choicest varieties* of table and wine Grapes, suitable for out-door culture in every section of the United States, will be received in March next. We have also ordered for gratuitous distribution, one case of the stones of the "Makbavalo Silva" or Free-stone Plum. Descriptive Catalogues will be forwarded by addressing the undersigned.
JOHN KOLBER, 592 Broadway, N. Y.

Delaware Grape Cuttings.

I will send, free of postage, wrapped in oiled silk, one dozen cuttings of the above grape, containing two eyes each, suitable for grafting into wild vines, for $2. In larger quantities, 6 cts. per eye.
CHARLES B. OTT, Nurseryman,
Pleasant Valley, Bucks Co., Pa.

BY MAIL — POST-PAID — GRAFTS, VINES, and PLANTS, packed in moss or oiled silk:

Grafts of the Baker Apple at	$0 50	per dozen.
Concord Grape Cuttings	1 20	"
Concord Grape Vines, suitable for mailing	0 60	cts. each.
Delaware Grape Vines	2 50	"
New-Rochelle or Lawton Blackberry Plants.	0 75	per dozen.
Calmon Pie Plants, crowns	1 00	"
Peabody, Wilson's Albany, McAvoy's Superior and other choice strawberries	0 75	"

Cash or stamps must accompany orders, which will be filled as soon as the season will admit. F. A. ROCKWELL.
Ridgefield, Conn., Jan., 1860.

BRIDGEMAN'S
HORTICULTURAL ESTABLISHMENT,
Nos. 876 & 878 BROADWAY,
NEW-YORK.

SEEDS. SEEDS. SEEDS.

The subscriber has now on hand a full supply of GRASS, VEGETABLE, HERB, and FLOWER SEEDS, embracing the old favorites, and including several new varieties of superior excellence. For sale (at the lowest market price), for quality and quantity, or in packages for retail trade.

New Catalogues furnished on application.

Also an assortment of HORTICULTURAL IMPLEMENTS, AGRICULTURAL AND HORTICULTURAL BOOKS.

All orders attended to promptly, and with exactness.
ALFRED BRIDGEMAN.

GARDEN, FIELD, GRASS, FRUIT, and FLOWER SEEDS.—I am now supplied with one of the largest and most complete assortments of Seeds ever offered to the public. My stock has been made up with much care. A large proportion are of home growth, being grown expressly for me, which I can recommend as true to name, and of the best quality. Care has been taken to have them perfectly clean.

Among my assortment may be found all the improved varieties of CORN for Garden and Field culture.

POTATOES, early, and for general crop.

BEANS—Early Bush and Snap short.

Large Lima and Horticultural Pole Beans.

CABBAGE—Both early and late of American growth.

CARROT—Early Horn, Long Orange, Altringham, White Belgian, of American growth.

TURNIPS—Early Dutch, Red Top, Strap Leaf, Long White French, White Globe, Yellow Aberdeen, Purple-top Ruta-baga, all of American growth.

SQUASH—Hubbard and Boston Marrow, &c.

OATS—Choice varieties, both American and imported.

SPRING WHEAT—Canada Clubb, China Tea, Golden Drop or Scotch Fife.

SPRING RYE—SPRING BARLEY.

GRASS SEEDS.—Hungarian, Timothy, Orchard, Kentucky Blue, Ray, Fowl Meadow.

CLOVERS—Large Red, Medium Red, White Dutch, Lucerne, Trefoil.

SPRING VETCHES OR TARES, &c.

Catalogues furnished on application.
R. L. ALLEN, 191 Water-st., New-York.

FARM PRODUCE
Sold on Commission,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.
HAIGHT & EMENS, 226 Front-st., New-York.
Refers to the Editor American Agriculturist.
" R. H. Haydock, Cashier Market Bank, New-York.

R. F. NICHOLS, New-Orleans,
Importer of fine Cattle, and Wholesale Agent for several Fruit and Flower Nurseries.
Consignments and orders solicited.

Keep your Feet Dry.

We call particular attention to the following report of a Special Committee appointed by the American Institute to examine the merits of A. Brower's Patent Waterproof Composition for Leather, for which they awarded a silver medal. Every man, woman and child ought to use it, as it not only makes boots and shoes water-proof, but they will last half as long again for it. For sale by all principal Boot and Shoe, Hardware, Druggists and Notion Houses.
A. BROWER & CO., 4 Reade-st., New-York.
Agents in the country wanted.

REPORT OF A SPECIAL COMMITTEE

Appointed by the Premium Committee of the Thirty-first Annual Fair of the American Institute, held at Palace Garden on Abraham Brower's Patent Water-proof Composition for Leather of all descriptions:

Respectfully report, That we have examined with some care the merits of Abraham Brower's Water-proof Composition and find they have neither been overestimated or overstated by the patentee. This Water-proof Composition is surprising in its effects on all kind of leather, particularly on that which has become hard and dry from exposure, such as Harness, Hose, etc., restoring the leather of which they are composed to life and elasticity.

The same restorative effects are produced on boots and shoes that are hard and unyielding, thereby rendering them disagreeable if not unfit to wear.

The composition is invaluable on new stout boots that are intended for wet weather, as it renders them impervious to water, while at the same time it preserves the pleasant feel of the leather, and on trial it will be found, if properly applied, that no inconvenience or soiling of the stocking will result, as is too frequently the case with the usual application of tallow and oil. And it is further said that this preparation does not prevent the usual polish of the blacking.

If the cheap yet neat and compact form in which this composition is offered to the public shall induce every householder to apply it to their boots and shoes occasionally during the fall and winter months, they will have abundant reason to thank the patentee for serving them.

L. HALLOCK,
J. S. SCHULTS, } Committee.
F. C. TREADWELL,

A Silver Medal awarded.

I certify the above is a true copy from the report.
JOHN CHAMBERS,
Secretary Premium Committee.

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Manufactured and Sold, Wholesale and Retail, by
JAMES WILLCOX,
No. 508 BROADWAY, opposite St. Nicholas Hotel,
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Sanford's Heaters,
PORTABLE OR SET IN BRICK,

Are pronounced by the most competent judges to be *the best*, giving the largest amount of heat, with a small quantity of fuel—owing to their being so constructed as to burn the gases and smoke, and with the largest radiating surface so arranged as to warm the air rapidly to a soft summer heat.

Eight sizes adapted to warming only one or two rooms, or a whole house, churches, academies, public halls, &c.

THEY ALWAYS PLEASE.

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THERMOMETERS, BAROMETERS, &c., of reliable quality and various descriptions, among which are those particularly suited for Horticultural purposes, which register the coldest and warmest degree of temperature during the 24 hours, in the absence of the observer. For sale by D. EGGERT & SON, 239 Pearl st.

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FOR
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THE
TOM THUMB GRIST MILL

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The axis of the mill is horizontal, and it is arranged to be run with a belt from a horse power, or any ordinary motor.

It may be run with a two-horse power, up to a speed of two hundred and fifty revolutions per minute, or it may be operated with proportionally increased results, for every increment of power and speed, up to four or more horse power, and four or six hundred revolutions per minute.

☞ The mill is warranted to perform as stated.

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WARREN CLARK,
Sec. of the Eagle Co.

Weight, packed for shipment by rail or express	140 lbs.
Price placed free on cars or steamboat	$20

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For hulling Buckwheat it is superior to all other inventions; and for grinding middlings, no other mill can compare with it.

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Paper bags, 1 to 14 lb. from $1.20 to $3.50 per 1000.
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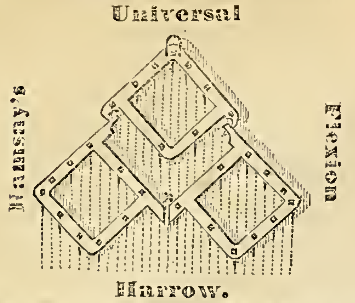

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68 AND 70

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68 AND 70

It is packed in one pound papers, each wrapper branded, "B. T. Babbitt's Best Medicinal Saleratus;" also, picture, twisted loaf of bread, with a glass of effervescing water on the top. When you purchase one paper you should preserve the wrapper, and be particular to get the next exactly like the first—brand as above.

68 AND 70

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70

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1½ pounds of refuse kitchen grease, boiled about four hours, with the Saponifier, which would ordinarily be thrown away, or sold at one cent per pound, say....... ...20c.
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It will clean type to perfection, and where a strong lye is wanted for any purpose, it will be found valuable.

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For sale at $30 per ton of 2,000 lbs, and liberal discount will be made by the cargo.

Circulars, with directions for use, may be had on application at our office.

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Agents for the ATLANTIC & PACIFIC GUANO CO.

GUANO.

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SAWINGS, TURNINGS AND CRUSHED BONES,

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For 1860.

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To all persons alive to the improvement of their gardens, orchards, or country seats—to scientific and practical cultivators of the soil—to nurserymen and commercial gardeners, this Journal, giving the latest discoveries and improvements, experiments and acquisitions in Horticulture, and those branches of knowledge connected with it, will be found invaluable.

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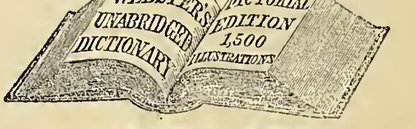

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Having made arrangements for fuller and more graphic reports of the doings of Congress, and of whatever else transpiring at the Federal Metropolis shall seem worthy of public regard, and having extended both our Foreign and Domestic Correspondence and strengthened our Editorial staff, we believe THE TRIBUNE may safely challenge a comparison with any rival, whether as an exponent of principles or as a reliable mirror of the passing world. Essentially, THE TRIBUNE will be what it has been, while we shall constantly study to improve its every feature, and "make each day a critic on the last." The general verdict of the Press and the Public has affirmed the success of our past labors, and those of the future shall be characterized by equal earnestness and assiduity. We ask those who believe the general influence of our journal to be salutary to aid us in extending that influence through an increase of our subscriptions.

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is printed on a large imperial sheet, and published every morning and evening (Sundays excepted). It contains Editorials on the topics of the times, employing a large corps of the best newspaper writers of the day; Domestic and Foreign Correspondence; Proceedings of Congress; Reports of Lectures; City News; Cattle, Horse, and Produce Markets; Reviews of Books; Literary Intelligence; Papers on Mechanics and the Arts, &c., &c. We strive to make THE TRIBUNE a *newspaper* to meet the wants of the public—its Telegraphic news alone costing over $15,000 per annum.

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1860.	Sun.	Mon.	Tues.	Wed.	Thurs.	Friday	Sat.	1860.	Sun.	Mon.	Tues.	Wed.	Thurs.	Friday	Sat.
JAN.	1	2	3	4	5	6	7	JULY	1	2	3	4	5	6	7
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MARCH	—	—	—	—	1	2	3		2	3	4	5	6	7	8
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	24	25	26	27	28	29	30		30	31	—	—	—	—	—

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VOL. XIX.—No. 2. NEW-YORK, FEBRUARY, 1860. [NEW SERIES—No. 157.

☞**Office at 189 Water-st.,** (Near Fulton-st.)
☞**Contents, Terms, &c., on pages 60-64.**

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February.

"Earth robed in white a peaceful Sabbath holds,
And keepeth silence at her Maker's feet,
She ceaseth from the harrowing of the plow,
And from the harvest-shocking ; man should rest
Thus from his fevered passions, and exhale
The unbreathed carbon of his festering thought,
And drink in holy health. As the tossed bark
Doth seek the shelter of some quiet bay
To trim its shattered cordage, and restore
Its riven sails—so should the toil-worn mind
Refit for Time's rough voyage."
MRS. SIGOURNEY.

It were a sad thing not to be in harbor at this inclement season, having all the ship gear snugly stowed, with rest and reflection marked out as the leading items of business. Every spar is sheeted with ice, the furled sails have every fold full of frozen sleet, and the deck is slippery as glass. Large icicles hang from the bowsprit, and a wreath of frost-work, beautiful as chased silver, girds the noble craft. There let her rest in winter quarters.

A winter morning like this, which almost curdles the ink in the pen as we write, were worth a long journey to see, and our summer friends from the tropics, and from the sunny south, who come to spend "dog-days" and to drink ice-water with us, should stay over one season, and see the ice at its fountain head, our ponds, lakes, and rivers bridged with crystal, our forests jeweled with diamonds, and all the green fields of summer robed in purest white. What scenes of tropical vegetation, of broad-leaved evergreens, or cypress woods festooned with funeral moss, grand as they are, can equal our pine and hemlock forests, our mountain sides and summits, clothed with fir, and spruce, when the frost-king robes them in their winter array, and the morning sunbeams bring out the full beauty and grandeur of the scene. Every object in Nature wears a new aspect in these winter days. The brooks that sparkled and danced in the summer, are now stiffened into carved crystal, and glitter with the beauty of still life. What artist could fix in stone, forms so beautiful as fringe the winter stream, the ice-clad rock, the grotesque shapes that guard the water-fall, the beaded grass and bushes, reflecting all the hues of the rainbow? The sere brown fields of autumn are white as robes of vestal. The forests, bare of foliage, and deserted by the singing birds, awe the spirit by their silence, and invite to self communion and reflection.

Yet there are not a few upon the farm who think that the tiller of the soil has little occasion for reflection, or any other mental exercise. Others may drink at the fountain of knowledge, and hold communion with the living soul that animates all these material forms, and understand those lessons which God has impressed upon all the works of his hands. But these are not the things for the farmer to contemplate. They regard all the learning of the schools, beyond the simplest rudiments of education, as so much useless lumber in the farmer's mind. They have no objections to reading, writing, and ciphering, for these branches enable him to keep accounts, and to guard himself against the frauds of designing men. But anything more than this, the knowledge of the earth and its history, the grammatical structure of language, the studies which teach a man to think, and use his stores of knowledge already gained, they regard as a useless waste of time, and tending to unfit a man for the cultivation of the soil. They would claim that schools are among the active agencies that are now depopulating the farm, and drawing our sons and daughters into other pursuits, already overstocked. They believe that the cultivation of the soil is mainly a business of brute muscle, and that it matters very little whether more or less brains guide the hand of the laborer. The working of this leaven is seen in the facts imperfectly brought out in our census returns, showing in one State over ninety thousand white adults, who can neither read nor write ; in four other States over seventy thousand each, and in three others over sixty thousand each, and in the whole country nearly a million of this uneducated class. By far the larger part of these are upon the farm, and have grown up with the idea ruling in the minds of the parents, that education is useless to men and women who are expecting to earn their bread with their hands.

Now it may be true that an unlettered laborer will lift as large a stone as he could do with a college education, that he can drive a horse or ox as well, and get as much labor out of brute muscles. But this does not prove that education will not help him in his business. A small part only of farm labor consists in dead lifts. The cultivator has many occasions every day in which skill will be worth more to him than strength, in the use of his own labor, as well as in directing the labor of others. It is undoubtedly true that education does beget a distaste for a certain kind of manual labor. The intelligent mind is not satisfied with this as an end. It craves the best results possible for every blow struck upon the farm. An adventurous Yankee, in a back settlement, was put to chopping wood with an old-fashioned tool, looking more like a tomahawk than an ax. When he found that he could not do a half-day's work with it, he threw it aside in contempt, declaring that money could not hire him to chop wood with such an implement. His mental culture had unfitted him—not for manual labor—but for an unskillful and unprofitable use of his muscles. Every blow that he struck, reminded him painfully of the better tool to which he was accustomed, and with which he could do twice the amount of work. He wanted something more than wages for his toil. He wanted the work done in a manner profitable to his employer.

And here, we apprehend, is the spot where the shoe pinches with the multitudes of our young men educated in our free schools. They have much better advantages for education than their fathers had fifty years ago, and their reading in books and journals keeps them in sympathy with the improvements that are constantly going forward in husbandry. The fathers want to keep on in the old routine methods, using nothing new but what is forced upon them by necessity. The sons object to this continual waste of human muscles, so long as they know a more excellent way. They can not be content with scratching the earth with an old-style plow and wooden moldboard, four inches deep, when the same amount of human labor, with a deep tiller, would loosen the soil fourteen inches, and make a seed bed in which all crops would rejoice. It is a source of mental discomfort to use a hoe weighing five pounds, when with one pound of steel they can hoe more, and better. It goes against the grain to use the hand-hoe between the rows, where the horse-hoe will do the work of ten men equally well. They could endure the scythe and the cradle when there was nothing better with which to gather the summer harvest. But now that a span with a mower or reaper will do the work of a dozen hands, the old fashioned scythe is an instrument of torture, and the July sun scorches like the breath of a furnace. The fathers are content with forty bushels of corn, or a tun of hay, to the acre. The sons know that these crops can be doubled without any greater tax upon the muscles. Labor is economized in manifold ways, and the boys, who have learned to cipher, see at a glance the difference between the old and the new methods of husbandry—between a bare living and an early competence or substantial wealth upon the farm. If they can use their minds in the cultivation of the soil, and make their labor remunerative, they have no objection to abide upon the homestead. But if a dogged conservatism rules the paternal acres, and work, irrespective of its reward, is glorified, the lads pack their trunks and seek a new field of labor—who can blame them?

It is a slander to say that learning has spoiled hem for manual labor. It has only created a disgust for *unprofitable* labor. Education increases many fold, the power of the human body over its outward circumstances. It substitutes steel and the muscles of brutes for the sinews of man, and makes him a workman that need not be ashamed in the subduing of the earth. Let the boys and girls, then, make the most of the winter schools. Let it be your settled policy to make farming attractive to your children. Encourage them to make experiments, and furnish them with every facility to make the most of their labor. Especially lay out your skill and theirs on the garden and orchard, and rear a new Eden around your home. So shall you dwell there in peace, and your children not be driven out, leaving bitter memories behind them.

Calendar of Operations for Feb. 1860.

[We note down sundry kinds of work to be done during the month, not so much to afford instruction to practical men, as to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

This table will be much fuller, and more important during the planting season when there is a greater variety of work to be done.

EXPLANATIONS.—*f* indicates the *first*; *m* the *middle*; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signifies that the work may be done in either or in both periods indicated; thus, work marked *fm.* indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

February, though the shortest month of the year is at the North counted the most tedious by many. The energetic farmer wearies of the comparative inactivity of the season, and is in haste to start the plow; the careless one finds his neglected stock rapidly losing in value, and is waiting anxiously for the first springing of the grass. The animals themselves grow restless under confinement. ....The main care required during this month will be additional attention to animals, to keep them "in good heart," that they may have no loss to recover when spring opens. Much preparatory work may also be done, plans of work completed, implements prepared, marketing finished, and every thing made ready for a prompt beginning with the opening season.

Buildings need frequent inspection to keep them from decay. Fasten all loose boards; properly secure windows and doors; batten cracks, knot-holes, and other leaks where cold enters and hay is wasted. Get out timber for new buildings if needed.

Cattle—Give frequent changes of food, allowing roots, bran mashes, a little grain, etc., with hay. Cut and cooked foods are most economical. Give plenty of litter. Keep cows about to calve, in separate stalls with ample room.

Cellars—Protect from frost but provide for ventilation, especially where there is dampness. Sort out decaying vegetables; allow no accumulation of refuse, but remove all to the compost heap.

Corn Stalks still standing on fields to be plowed next Spring, may be leveled during open freezing weather, as described in Dec. No. p. 358, last Vol. This will greatly facilitate the plowing.

Cotton—As soon as the season permits, prepare deep rich beds of fine tilth to bring forward the plants as early as may be.

Drains—Remove obstructions of ice, etc., both around the buildings and in the field.

Fencing—Materials may be got out, and prepared under cover. Build new and repair old, at the earliest available time.

Flax and Hemp—Finish dressing.

Fuel—Be sure to provide a year's supply, cut and stored before Spring.

Grain should all be threshed now—vermin are taking heavy toll: secure the bins from their entrance. Market whenever prices are remunerative.

Grain and Clover Fields—Allow no stock to feed or trample the young growth.

Help—Secure a full supply before choice hands are all engaged. Read "Talks by the Doctor" on page 51.

Horses and Mules—Look well to their feet; keep sharp-shod, and clean well after traveling. Give carrots and cut feed. Keep them in comfortable stables; blanket when excessively cold, and allow plenty of bedding.

Hogs—Feed liberally, with warm, cooked food, with which mix charcoal and salt occasionally, especially for breeding sows. Keep pens well littered with leaves or short straw, to increase the stock of manure.

Ice Houses—Complete filling; examine drainage and ventilation to secure perfect preservation.

Manures—Depend on home manufacture, rather than the purchase of highly advertised compounds. Keep muck or plaster in all places where ammonia may be absorbed. Cart out in open weather. Read articles now in course of publication on subsequent pages.

Maple Sugar—Have all apparatus in readiness. Commence tapping as soon as sap will start. For large groves, an improved evaporator will pay.

Potatoes—Secure the best for seed; keep varieties separate. At the South plant early for northern market.

Poultry will repay proper care. Read article on page 41.

Sheep—Give potatoes, turnips and other roots cut fine, with hay, and a little grain for breeding ewes. Allow them warm sheds separate from other stock. Salt regularly and give plenty of water.

Sweet Potatoes at the South may be bedded out for a supply of sets for transplanting.

Tools—Repair all needing it; replace those lent, and return borrowed; select new for coming season. Keep iron from rust with 3 parts lard and one of resin, melted together. Paint all wood-work needing it.

Orchard and Nursery.

Unless the season is early enough to admit of transplanting during the latter part of the month there will not be much work required here. Where trees are taken out early to be shipped South, great care is needed in packing, to guard against freezing. Those which are frozen, should be unpacked carefully and the roots buried in sand until thawed.....Early planting in the nursery is desirable, and everything should be in readiness to commence work at the first favorable weather. Grafting is better done here in March; at the South February is favorable. See article on Grafting knives on page 51.

Cions—Cut any time this month. Label each sort distinctly, and preserve as directed last month.

Insects—Scale bug can now be readily destroyed by scraping the trunk and main limbs, and scrubbing with whale oil soap or lye. Examine the forks and ends of limbs for cocoons and eggs of worms.

Manure is needed to promote fruitfulness in the orchard. Apply a heavy coat around each tree, of good compost, or decomposed muck, spreading it well.

Pruning—We advise late Summer or early Autumn for this work, but now is a better time than after the buds have swollen and the sap started. All dead wood may be removed without injury.

Snow—Remove from the branches of low spreading trees, to prevent splitting of the limbs as it settles.

Stakes, labels, tallies, packing bags, mats, etc.—Have a good stock in readiness for Spring use during the busy season of nursery sales or planting.

Transplanting may commence as soon as the frost is out of the ground, and the soil in working order.

Kitchen and Fruit Garden.

Active operations commence in this department this month at the South, particularly where produce is raised for northern markets. The *earlier* vegetables can be brought forward, the more remunerative are the prices.

In this latitude, preparations can be made by planning the grounds, providing abundance of manure, putting implements in order, and in the latter part of the month making hot-beds.

Cold Frames—Air may be admitted during mild weather. If cold continues, do not remove the snow covering. During cold, open weather protect with mats or straw.

Cuttings of Currants, Gooseberries and other fruits may be taken when the wood is not frozen. Keep them buried in sand in the cellar or other secure place.

Fences—Keep in repair, and prepare materials for new where wanted.

Grape Vines may be pruned early this month.

Hot-Beds—Nothing is gained by making them too early; for family use, next month will be time enough. If the weather is sufficiently mild at the end of February, enough tomatoes, cabbage and lettuce, etc., may be sown for the earliest plantings of market gardeners.

Manures—Lose no opportunity of collecting an ample store. The quantity may be increased and the quality improved for many uses, by composting with muck, leaves saw-dust, etc.

Prune Currants and Gooseberries early if neglected until now.

Rhubarb—Roots planted in boxes and set in the green-house or other place suitably warmed will come forward early. It may be hastened by surrounding the crown with manure. Read article on page 50.

Seeds—Select new and improved kinds from catalogues. Try samples before purchasing largely. They are easily sprouted, if good, by laying them on cotton in a dish of water placed near the stove.

Tools—Have all in repair and procure new if needed.

Trees and Vines—Cleanse from moss, insects, rough scaly bark, etc.

Trellises and Arbors—Make necessary repairs, and erect new. Fruits and flowers are more attractive when trained on tasteful supports.

Flower Garden and Lawn.

Although there is not much save the evergreens, to attract admiration upon the lawn, and the flowers are still out of sight, neatness and tidiness should be preserved. Remove all dead branches and scattering twigs which have fallen upon the walks or plats. If trees or shrubs have been thrown out of place by wind, brace them up, and confine with straw ropes or matting and twine, until they can be permanently righted. Allow no animals to invade the enclosure to destroy the shrubbery. If the weather be sufficiently mild, new trees and shrubs may be planted. Further South, borders may be prepared and sown with annuals.

Evergreens—Remove snow that endangers the limbs.

Hot-Beds—Provide materials for, and make during the latter part of the month for early annuals, cuttings, etc.

Manures—Collect a good supply of muck and stable manure for Spring use. A good dressing will promote a vigorous growth and a free bloom.

Prune Altheas, Roses, Honeysuckles, etc., during the mild days of this month, unless they were attended to last Fall. Save the cuttings for propagating a new stock.

Transplanting—Hardy trees and shrubs may be set out during the latter part of the month if the frost will permit.

Green-Houses.

Care will be requisite not to overheat the houses by too much fire upon cold days; ventilation will also be required when the weather is mild, as the sun's rays have now considerable power. The plants should receive no chill by sudden changes. From 45° to 50° should be maintained, allowing the temperature to fall at night to about 40°.

Azaleas—Water more freely as they increase in growth.

Cape Bulbs in pots require plenty of light to ensure thrifty and hardy growth. Sow seed and make cuttings; give bottom heat to those thus starting.

Cuttings of Hydrangeas, Fuchsias, Myrtles, Pelargoniums, etc., may now be prepared to furnish supply for outdoor planting.

Decayed branches, leaves and all litter should be swept out often, refuse of every kind removed, and the air kept free from impurities; want of cleanliness detracts greatly from the appearance of the green-house.

Insects—Watch carefully against every species; keep them in check by syringing and fumigations. A cat should be allowed free access, as mice often prove troublesome.

Top dress unthrifty plants, and give a little manure water from time to time.

Water—Increase the amount as the plants push into growth, but avoid an excess. Keep the drainage good

Hot-Houses and Conservatories.

Many of the directions of last month are still seasonable. The frequency of change in the weather makes great watchfulness necessary to regulate the fires. From 70° to 75° of heat should be maintained. If snow falls, the roof should be cleared to admit the light which the rapidly growing plants now require. If from want of proper ventilation the condensed moisture gathers and drops upon the plants below, tin conductors should be suspended to collect and carry it off.

Air—Admit cautiously by the top sashes, as often as the weather will allow; cold currents must be avoided, as a check now will retard the growth of many plants until late in the season.

Azaleas, now in bloom, should be syringed freely.

Bedding Plants—Insert cuttings and make layers for a good stock of Petunias, Pelargoniums, Verbenas, Dianthus, Candytuft, Pansies, Dicentras, Daisies, etc., for early planting in the open border.

Bulbs—Keep a succession of plants in bloom by bringing forward those kept in a cool room, or the Green-House. Change the water of those in glasses, about twice a week.

Camellias—Syringe once or twice a week, but keep the water from falling on the flowers as it hastens their decay. Examine the foliage for traces of the red spider which injures many collections. If plants are affected, wash each leaf with a sponge and soft water, and syringe three or four times a week.

Carnations—Increase stock by making layers and cuttings.

Cuttings may now be taken from many growing plants. Plunge them at once into prepared pots of soil and cover with glasses.

Grapes require much care in the early houses this month

Those beginning to color, or about ripening, need a comparatively dry and warm atmosphere. Later vines require thinning, while others have been so kept back as to have scarcely "burst" into growth. Use sulphur to counteract or destroy mildew.

Insects are now troublesome, unless they have been kept in check by following the directions already given. Fumigating with tobacco will be found effectual to destroy any which have established themselves.

Repotting—Many rapid growing plants will now require a shift to pots of a larger size Keep potting soil at all times in readiness.

Seeds of many of the hardy annuals should be sown for an early blooming stock to be planted in the open grounds.

Soil in Pots – Stir often to prevent its crusting. Keep free from weeds.

Syringing often. will maintain a humid atmosphere, which is requisite at this season. Dampening the walls and floors has a similar effect.

Water – Give judiciously according to the wants of growing plants. Excess is quite as injurious as too little. Twice a week will usually be sufficient. Evaporating pans filled with water, and placed in different parts of the houses or rooms will be beneficial.

Apiary in February.

BY M. QUINBY.

Care is still necessary to see that the air passages are not closed with dead bees or ice during severe weather. Moderate temperature for a day or two, will melt all the frost, when the hive should be raised and the bottom board swept off clean....Particles of comb scattered on the floor, indicate that mice have found their way inside; they should be at once excluded. Any stocks that are to have their stands changed before Summer, should now receive attention, whether the distance be rods or miles. The weather may be warm enough for them to fly before the month is out; it is much better to have them mark their permanent locality at first. If a new bee house is to be erected this Spring; choose some mild days in this month and have it ready, and the bees introduced before they leave their hives. If bees are to be purchased and brought home, they can be moved easily on snow. The heaviest hives are not often best; those weighing from thirty-five to forty pounds are preferable. See that there is a good cluster of bees among the combs. The size of the colony may be estimated by the quantity of chips on the floor board....The hive, whether carried on a spring wagon, or sleigh, should be inverted. The bees may be confined to the hive by covering it with thin muslin, fastened at the corners with tacks. In arranging the stands, give four feet between the hives, if possible to spare the room, six feet would be better; but in a bee-house, or other small place, stocks must sometimes be crowded.

Forward Spring Work Now.

"Take time by the forelock" is as good a maxim for farmers as for others. While there are some kinds of labor that can only be performed at particular seasons, there are others that can be done at any time, when the weather favors out door operations. The Spring, in all the northern part of our country is a very brief season, and upon the farm, it is usually over crowded with work. Slack farmers especially, leave every thing to this season. The manure is not carted until the ground is settled; the plowing is put off until May, and the planting until June; the potatoes and oats that flourish best in cool weather, are forced to mature in the heat of dogdays and rot, rust, and smut are often the result of the late sowing and planting.

Something can be done even at this season, to help on the Spring work. The wood house is, or ought to be already filled so that the ax will not need to be lifted to prepare fuel from March to December. A good part of the manure can be carted now, much better than in planting time. The ground is now frozen so that the cart path to the field to be plowed, is soon worn as smooth as a railroad. It will be a much less tax upon the strength of a team to draw a hundred loads of manure now, than to do it in April, when the team is pressed with plowing and other farm work. It is pretty well established now, that yard manure prepared in the usual way with muck and loam, does not lose much of its value, when piled up in Winter in large heaps in the field where it is to be used. From our own experience we do not think green stable manure would be injured by the same treatment, if it were well mixed in the field with muck or peat. The piles should be made long, narrow, and high, say five or six feet so as to shed a part of the rain.

If any of the meadows are to be dressed with fine compost, there is no better time than the present to do it. The sward will not be cut up, and the warm Spring rains will carry down the fertilizing properties of the manure to the roots of plants. This must not be done however, on rolling land, or on steep hill sides where the rains would wash off part of the manure before the frost comes out of the ground.

A large portion of the Spring work can be anticipated before Winter breaks up, and then the farmer can seize upon the best time to plant and sow, and drive his work all through the season instead of being driven.

Protect the Tender Plants.

During this month and the next, all tender trees and shrubs will be liable to injury from frost. In the earlier months of the Winter, they were in so deep a slumber, that there was little danger of their being awakened by the brightest and warmest sunshine. But now, they have had a good nap, and are ready to be aroused; and the sun has risen higher in the heavens, and shines with greater power. For these reasons, tender vegetation is liable to injury.

Therefore, if any one has hitherto neglected to protect his tender trees, shrubs, and vines, let him now do so, without delay. In most cases a very light covering will answer, such as a few evergreen boughs, an old sack or mat, or a little straw—just enough to keep off the sun. A friend of ours gets a fine annual display of *Spiræa prunifolia*, by simply wrapping his wife's old apron around the top of his bush, while his neighbors, who take no such precautions, very often have none. The Swedish and American Junipers are hardy enough, but they often come out in the Spring in quite a rusty, purplish dress; and the American Yew looks quite shabby; but this rustiness might be easily prevented by some simple protection, as before noted. The trunks of pear-trees, cherry-trees, peach-trees, and some ornamental trees may profitably be sheathed in straw, or have a section of bark, or a simple board set up on the south and west sides.

Hastening Vegetation in Spring.

One mode is by sheltering plants from cold winds, and exposing them as much as possible to the rays of the sun. This can be effected by building walls or high, close fences on the stormy sides of gardens and orchards, also by surrounding them with hedges and belts of evergreen trees. In England, it has been found by an experiment of several years, that cherry-trees trained against a south wall, will ripen their fruit ten days or a fortnight earlier then in the open orchard. In cold, damp, and cloudy summers, the difference is less obvious, but even then, the flavor of the wall fruit is superior to the other.

Skillful gardeners sometimes gain an advantage of several days, by throwing up beds or banks with a slope to the south, of about 45°, and planting thereon their earliest crops of lettuce, radishes, peas etc.; the northern slopes being used for late crops.

Of the influence of manure in accelerating vegetation, we need hardly speak. Everybody knows what tropical growth horse manure engenders in hot-beds and forcing houses, while yet the soil of the common earth around is cold and unproductive. Everybody knows what wonders guano, hen dung and other fertilizers perform every spring in garden and field. But aside from the action of real manure, there is a benefit to be derived from the use of other substances, such as sand and lime on clayey soils, of chip-dirt and leaf-mold, the tendency of which is to lighten up the ground and free it from surplus water. The use of leaf-mold, charcoal, chip-dirt, blacksmith cinders and whatever tends to make the soil dark-colored, contributes to the same result.

Here too, may be mentioned the powerful influence of under-draining, which rids the soil of standing water, and prepares it to absorb the earliest rays of the Spring sun. Ridging up the earth in winter, tends in the same direction, and for the same reason. Faithful attention to these two last processes often gives the gardener a gain of a week or fortnight in spring.

Here may be mentioned also, the importance of selecting proper seeds The seeds of fruits or vegetables, which ripened earliest the preceding year, are likely to start earlier and to mature quicker than those which ripened late. Every gardener, therefore, should take great pains each year to save his seeds from the earliest matured products of his grounds.

Think Twice before You Move.

Multitudes are contemplating a move, *somewhere*, in the coming Spring, or as soon as they can sell out, reckless of the old maxim: "A rolling stone gathers no moss." They have just got their farms cleared up, and taken a few crops from the virgin soil, or they are situated upon the old homestead, with a hundred acres of poor, hard cropped land. They have good neighbors, good schools, and good markets; but they are not making money quite so fast as they wish to, and mean to try their fortunes in a new place.

Some, of course, in the older States, must move to make room for the increasing population, but, as a rule, they should be the young, who are not yet married, and have not the necessary capital to purchase a farm at the East. The probability is, that such will do better where land is cheaper, and labor commands a better price. But if a man is already settled, and has pleasant associations around him, the probability is, that he will lose money by moving. If there is nothing else wrong but the land, pluck and industry will bring that right. There may be more wealth in the old farm than its owner dreams, and a better management may enable him to unlock its treasures.

Perhaps deeper plowing is needed to break up the hard pan, formed by running the plow nose four inches below the surface for a century. *Perhaps* two-thirds of the manure is wasted, and there may be a loud call to stop the leaks. *Perhaps* the cattle are foddered at the stack all winter, and there is a dead loss in the extra consumption of hay of ten dollars for every head of stock. *Perhaps* the best part of that farm is still under water, for half the year, and it only needs a little draining to turn a waste into a fruitful meadow.

A few changes of this kind in the management of a farm make all the difference, between success and failure, riches and poverty. As a rule, it is much better for a farmer to change his management than to change his location. We have observed many of the latter kind of changes, and seldom found them profitable; but the other kind pay well. Our advice then is to drive down the stakes a little deeper where you are, and persevere until you conquer. Such a conquest is glorious. We had rather take such a man by the hand than the Governor of a State, or a Member of Congress. He has the stuff in him to rule an empire; for, as a successful farmer, he has already conquered a small one.

What of the Apple Pie Melon?

We can hardly answer. Some unknown friend sent to our office a large specimen, just as the Dec. No. went to press. It was taken home and cooked as per directions given in October. The pies were fair, but not quite equal to the genuine apple. They would pass very well, however, where apples could not be got, and when seed can be obtained without paying too much for it, we would not discourage planting. We attempted to raise a quantity the past year, but had poor success. Not more than five in a hundred came up. Those that did, made a good growth of vine, but no fruit set until too late for it to mature. An associate secured a large growth of vine, and a small yield of mature melons of fair size. Others tell of getting six to ten large melons from a single plant. This is all we can say of it yet.

How our Forests are being Preserved.

In the older States it is a sad spectacle to see the waning of the woodlands. One can hardly visit the home of his youth after an absence of twenty years, without missing some favorite forest haunt of his boyhood. The chestnut trees he used to climb, to shake down the nuts in the frosty mornings of Autumn, the tall walnuts from which he shot the squirrels, are as dead as the game he killed in his youth. There is a barren rocky pasture on the very ground once shaded with oaks and elms, and desolation reigns amid the scenes of former splendor and glory. One can but deplore the fall of these forest monarchs, and the clearing up of lands that a wise economy would always keep in wood. They are too rocky for tillage, while other lands in the same neighborhood, free from stone can be had in any desirable quantity for a few dollars an acre.

The introduction of steamboats and railroads, the increase of our population, and the wasteful methods of cutting and using fuel, are among the chief causes of this waning of our forests. The evil reached its hight in New-England, and in the middle States some fifteen years ago. There are now symptoms of amelioration, and with the diffusion of knowledge upon the proper treatment of forests, the evil we trust will be arrested, and these auxiliaries to good husbandry will be preserved. If the forests in the States we have indicated, were properly located, it would not be desirable for farming purposes that they should ever be diminished. The land already in tillage would yield larger crops in a series of years, than the whole land would yield stripped of its forests. The importance of shelter from the prevailing winds of Winter and Spring, is beginning to be understood. Woods also upon the high lands are reservoirs of water, and have much to do with the equal distribution of rain and moisture through the Summer. Lumber is increasing in price, and the owners of woodland find it an object to husband the timber that was once devoted to the fire.

The introduction of coal has had a very important influence in saving the woodlands. The steamboats upon tide water, that once used wood altogether for fuel, now use coal exclusively. The locomotives are beginning to look in the same direction, and we trust the day is not distant when coal will supply this want on all our railways. The cities and villages on navigable waters, and many of those on our railroads, are already supplied with their fuel from the coal mines.

But the working of our iron mines has befriended our forests even more than coal. Stoves and fire frames of all shapes and sizes to save fuel, have been introduced extensively into all parts of the union. There is hardly any department of human effort where more brain work has been expended, than in these contrivances for economizing fuel. The greatest amount of heat with the least expenditure of fuel, has been the problem that has absorbed the attention of the nation for the last twenty years. It has received the notice of men of science and practical skill, of reverend divines, and college professors. It has been often solved, and every new stove, furnace, or range, brought out in this time, has been, in the esteem of its inventor, the solution of the problem—the *ne plus ultra* of heating apparatus. With all the failures, and they have been many, there has been immense saving in the consumption of fuel. An average farmer's family does not use one fourth the fuel consumed fifty years ago.

Besides these sources of economy in the use of wood, there has been a very great improvement in the construction of our houses. Both in their arrangement,and in the thoroughness of their building there is a marked advance upon the old style of farm house. The chimney has shrunk into comely proportions, and no longer takes up a fourth part of the house.—Ventilation is no longer provided for through the doors, windows, and chimney flue, but is regulated by a register. The joiner's art has wonderfully improved, and windows let in light without air, and doors only let in the wind by special request when open. The heat is saved for in-door use, instead of passing off into the atmosphere.

The use of coal, of stoves, ranges, and furnaces, and improved dwellings, all tend to save the forest, and the farmer, who finds his woodland decreasing, may possibly find a remedy in one or all of these expedients. Many farmers in the vicinity of seaports, and near navigable waters, can now heat their dwellings cheaper with coal, than with wood. The innovation has already commenced. A good stove for the kitchen or parlor will often save its cost in fuel in a single season. The carpenter's bill for repairing an old house, putting in tight windows, doors, and floors may be paid by the saving in fuel in a few years. Wood at four dollars a cord, and two more for the labor of cutting and fitting for the fire, soon sums up to a hundred dollars.

But there is another influence at work, more important than any of these, in its bearing upon the preservation of the forest. The great plea for clearing woodland has always been the need of more land for the purpose of tillage. The farmer has found his old lands under the skinning system of cultivation, continually running down, and he has looked to the new lands, covered with wood, as his only resource to keep up the productiveness of his farm to the old standard. Now it has been discovered that the old acres, by deeper plowing and higher manuring, can be made to double or treble their crops at the farmer's pleasure, so that he has no need to enlarge the surface of his plowed fields, but only to deepen them. Thousands upon thousands are acting upon this suggestion, and thorough tillage is now actually doing more for the minds of our farmers than it is for their farms, great as the change is. Multitudes have waked up to a new existence within the last few years, and begin to have unbounded faith in the capacity of their acres to produce food for man and beast. Three tuns of hay to the acre, eighty bushels of corn, two hundred of potatoes, thirty of rye and of wheat, a thousand of carrots and of turnips, are the every day facts of improved husbandry. We do not want more acres under the plow, but the plow more under the acres we already have. Thorough tillage will give us bread enough and to spare, and save the forests.

For the American Agriculturist.

Country Burying Grounds.

"A sleeping place" is the signification of the Greek word (*koirmeterion*) from which is derived our term Cemetery—a designation at once appropriate and suggestive, and exhibiting the taste which marked that refined people. In many sections, burial grounds resemble anything but sleeping places. Situated often in some waste corner, where thistles, brambles, and other foul weeds find a secure shelter, or upon a bleak hill side where nothing will grow, surrounded by dilapidated fences, and defaced by mutilated headstones, they look as if contrived purposely to highten the gloom of the grave, and to make Death still more an object of terror. No wonder the frightened school-boy hurries past such a desolate place, and is haunted with fear at the prospect of being finally deposited there. Where grounds are thus generally neglected, those who would love to adorn the graves of their kindred are deterred from the attempt, or if trees are set, and flowers planted, marauding sheep and envious weeds soon destroy the tokens of affection.

Private plots are sometimes set apart upon the farm, where each family may see that at least decent respect is shown to the memory of relatives. But farms frequently change owners, and these spots, once held sacred, are regarded as incumbrances and eye-sores by the new occupant, who can scarcely be expected to keep them as they should be kept. This common neglect of rural cemeteries has been called "heathenish," but the Greeks, the Romans, and the Egyptians committed no such barbarism. Their cemeteries, where burning of the dead was not practiced, were beautified and made attractive, and the remains of their friends were in all cases preserved with scrupulous care.

Latterly the subject is receiving more general attention. New-York, Boston, Philadelphia, and most large cities in the United States have now extensive grounds dedicated to this purpose, properly laid out and beautified, and numerous villages are doing the same thing. In rural districts, where land is comparatively cheap, it is easy to carry out such an enterprise—it only needs some one to *start* it. After the matter has been presented to individuals, let a meeting be called for discussion, and a committee appointed to report upon a site, probable cost, etc. At subsequent meetings it can be ascertained how many, and whether enough, will take plots sufficient to warrant purchasing land. Much difficulty will be avoided by having this paid for at the start; then the future income can be devoted to regulating, setting out trees, and keeping in order. In many instances grounds already occupied, are suitable, and only need improvement. There is no reason why the cemetery may not thus be made a most ornamental and attractive spot, but every reason in its favor. A frequent walk among the memorials of the loved dead will recall lessons too often forgotten, and the thoughts of the departed will be all the pleasanter when amid the flowers we have planted around their graves, and the singing birds that make their house in the trees we have set. RURALIST.

Tim Bunker on giving Boys a Start.

MR. EDITOR: "Be sure you're right then go ahead." Davy Crockett got out considerable truth when he started that proverb. I guess it is about as applicable to starting boys in life, as it is to starting land on a right course to make it profitable. Now you may take poor, run-down land, and plow it, and crop it, as much as you have a mind to, and you can't make it pay for the labor of working. It needs the right start to begin with, and then you can go ahead and get pay for cultivating.

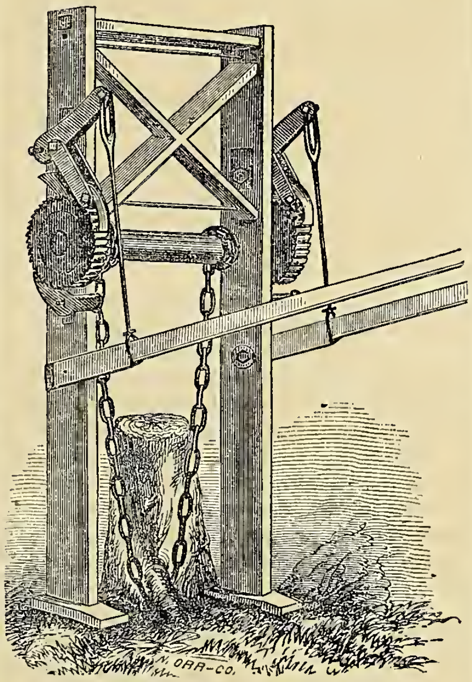
Now a great many folks make the same mistake with their boys, that I did in working Mrs. Bunker's dowry lots, until I begun to turn in green crops. They don't give 'em the right start. A good many work their boys till they are twenty-one, and then send them off to shift for themselves, without capital, and without any experience in the earning and use of money. They stint them on schooling in the latter part of their minority, because their work is worth as much as a man's. They seem to have as little regard for the future welfare of the boy, as they do for their land when they get all they can out of it without putting on any manure. They pay very little attention to their morals, and before they know it, the boy has learned to chew tobacco, smoke, drink, and swear, and perhaps to rob water-melon patches, and hen-roosts. He comes up to manhood a Kier Frink, fond of low company, and ready for any mischief that offers. They do not see their mistake until it is too late to mend it.

Now you see, to give boys the right start, you must begin early with them. If you don't get right notions into their heads before they are twenty-one, I guess you might as well give them up. You can't begin too soon to cultivate their hearts, and to teach them to respect the rights of their Maker and the rights of their fellow-men. Some seem to think it makes no difference what sort of principles a young man adopts, or what habits he forms. I have lived long enough to see that there is nothing pays so well in the long run, as correct moral habits. These make a young man entirely reliable, and his friends can trust him in any business. Any one of the vices, to which so many boys are addicted, is a great pecuniary damage. It is just like contracting a heavy debt at the beginning of life, and having to pay interest all through. You may safely put down the use of tobacco as a debt of five thousand dollars, the use of intoxicating drinks as five thousand more, and swearing, lying, and theft, at about the same figures. A young man wants nothing so much, when starting in business, as the confidence of his fellows. This must be based upon his character.

But when we have got a boy's heart and morals all right, there is something else to be done for him. A man, however upright, will not succeed without industrious habits, and a knowledge of the value of money, which is one of the best incentives to industry. There is only one way in which we can estimate money at its proper value, and that is to earn it. A silver dollar represents a day's work of the laborer. If it is given to a boy, he has no idea of what it has cost, or of what it is worth He would be as likely to give a dollar as a dime for a top, or any other toy. But if the boy has learned to earn his dimes and dollars by the sweat of his face, he knows the difference. The painful stretch of his muscles through the long rows of corn, or at the plow tail, is to him a measure of values, that can never be rubbed out of his mind. A hundred dollars represents a hundred weary days, and it seems a great sum of money. A thousand dollars is a fortune, and ten thousand is almost inconceivable, for it is far more than he ever expects to possess. When he has earned a dollar, he thinks twice before he spends it. He wants to invest it so as to get the full value of a day's work for it.

It is a great wrong to society and to a boy, to bring him up to man's estate without this knowledge. A fortune at twenty-one, without it, is almost inevitably thrown away. With it, and a little capital to start on, he will make his own fortune better than any one can make it for him. The most of the capital they need to start with, they might earn in their minority. It is better for farmers to pay their boys regular wages, beginning, say, when they are fourteen, and teaching them how to take care of it, than to give them a much larger sum when they are of age. The seven year's wages, if put in the Saving's Bank, in annual investments, would come to over a thousand dollars, and with this, and a good character, and industrious habits, a young farmer's fortune is secure. That is double the capital I had to start with; but then I had Sally Bunker for a wife, and the like of her is better luck than common mortals can expect.

Yours to command,
Hookertown, Ct., Jan. 15] TIMOTHY BUNKER, ESQ.



A New Stump-Puller.

In many parts of the country, a cheap, portable, effective implement for extracting stumps, is a great desideratum, and a number of forms have been brought forward. To keep our readers posted on what is doing, we present herewith an illustration of the latest machine designed for this purpose. The engraving was prepared expressly for these columns. Not having had opportunity to see the machine in actual operation, we cannot speak from practical observation as to its utility. From its construction, it would appear to have power enough at least, and we have been furnished with the testimony of several farmers, who speak in high terms of its operation. The inventor names it the "Hercules Stump Puller." In preparing the engraving we have endeavored to make its construction so plain as to be readily understood without particular descriptions. It will be noticed that the chain winds around the shaft or windlass. This is turned with great power by means of the compound levers acting upon the ratchet wheel. The implement can be readily moved about by laying it on an axle between two wheels—taken from a wagon.

For the American Agriculturist.

Hints on Board Fences.

[The following article was furnished partly as a critique upon the method of building board fences, described by the writer of the prize articles in last volume. We omit the special criticism, and give the writer's description of what is considered the best mode of building this class of fence in his section of the country, having respect to economy, strength, and durability.—ED]

Posts.—The most durable kinds of wood that we have, are locust, cedar and oak. The variety called the swamp white oak is considered the best, though the upland white oak is often used. Of cedar, the red is far preferable to the white. The locust is better than all others: and here I would observe that, if farmers would pay more attention to the raising of the locust, they would soon find it much to their interest. The locust grows rapidly; and if set out by the road-side, or on rough, stony, or otherwise unprofitable parts of the farm, they would in a few years be amply repaid for the labor and expense. On the road-side they are ornamental, and fragrant in the season of blossoms, and give a pleasant shade. Fifteen years' growth will make from three to six or eight posts to each tree—the most durable of any timber in our country. As evidence of its durability, I may mention that a friend of mine visited his native town in Massachusetts, and there examined a locust post that had been in the ground, according to tradition and actual knowledge, for *seventy years*, and it was still in a pretty sound condition. In this country, where the tree grows very rapidly, it is not expected to be as hard and durable as near the salt water, on a light and generally more sterile soil; still it is superior to any other, and easy of cultivation.

For a good strong fence, and none other should ever be made, the posts should be set not to exceed six feet apart. If the boards are only fourteen feet long, then one post in the center will do; but if they are sixteen or eighteen feet in length, two intermediate posts should be used. Two and a half feet is a proper depth to set the posts, and after they are thus set, and before the boards are put on, an embankment should be thrown up around the posts of from six to ten inches high at least; more than this would be better. The surface at the center of the embankment, or along in a line with the posts, should be made level and smooth; this can be done before putting on the boards, much easier, quicker, and cheaper than at any other time. The team can pass between them, and draw the plow without hindrance. The benefit of this ridging is obvious; it secures the posts to a greater depth in the soil; it makes an even surface for the bottom board; it stops up all hog-holes, and causes the water to pass off more freely from the fence to the ditches on each side. The ditches should be about two and a half, or three feet from the center, each way. Having set the posts, and leveled the ridge or embankment, then proceed to face the posts (if split from the log) with a common narrow ax. As they are held fast in the ground at one end, a man, with a little mechanical ingenuity and a good eye, can easily and quickly do this with sufficient accuracy. If the posts be sawed, no other facing will be necessary.

In nailing the boards upon the posts, the most ommon practice is to break joints, and, if no caps are designed to be put on the fence, this, undoubtedly, is the better plan; but to secure a durable and strong fence, it is better to make each panel separately; select the broadest, widest, and best posts for the ends of the panels, and set and secure them in the ground first. By doing this, you will be more likely to get the fence straight, and less care will be needed in placing the intermediate posts. An inferior intermediate post will answer the purpose, perhaps, as well as the best. If your ground is uneven, as up hill and down, a fence, when completed, will have more symmetry and beauty.

Hight.—Four feet above the embankment is high enough for any fence. This hight is fully equal, in effect, to one of four and a half or five feet, when built in the ordinary manner.

Width of Boards.—There is, I conceive, a stereotyped error in graduating the width of the boards; that is, putting a wide one for the bottom, and narrower ones as you approach the top. The better plan is to have them all of the same width, and that width five or six inches only; it is desirable to have frequent open spaces, that the wind may pass through more readily, and not to have so great a width of board resting upon the post at one point, holding moisture and causing it to rot much sooner. For this reason, also, split posts, as a general rule, are preferable to sawed ones. Select one having a pretty wide face, for the ends of the panels to be nailed to, and all the others trim in such a manner as to have as little surface touching the board as possible—one inch surface, or even less, to nail to, is better than four or five. Battens also induce rot; if used at all, they should be put only over the ends of the boards where the panels come together, and be only about four inches wide. For an extra strong fence, a board should be nailed on each side of the posts at the top, and after all the posts are sawed off level, put a cap on, and nail it securely *to both boards*, as well as to the top of the posts, observing to break joints by placing the center of the cap over the post where the panels meet; this gives the whole strength of the cap edgewise in keeping the fence stiff at the top. In doing this, it will be perceived that the first cap must be sawed in two in the middle, and put on first, then all the others at full length will break joints over the proper post. It is not necessary that the ends of the caps should come together over the end of a post; it would be best not to have them do so, for the reason that when a whole board is made to cover the end of the post no water can get to it, to cause it to decay. Where the ends of the caps come together, more or less water will in time pass through the joint. One word as to putting on the caps. Before commencing the operation, see that the top of the fence is straight; if any variation from a straight line is noticeable, crowd the post in or out as the case may be, and secure it there by temporary braces. After this is done, nail on the first cap of half length, then put on the second cap, and let the end of it lap over the first, half an inch or more, and nail it securely also, except three or four feet from where the lap is. Then pass a saw through both caps where they come together, giving it a slight inclination from the perpendicular or right angle, and pass it through both boards, and when the short pieces are removed, the ends come together with a perfect joint; then nail them to the very ends.

The nails proper for a board fence should be of different kinds and sizes. If hard wood is used for posts, the eight-penny fence nails are large enough; but if soft wood, as the white cedar, then a larger sized fence nail should be selected, and for putting on the caps, the common eight or ten-penny nail will answer the best purpose, and will be cheaper, as there are more of them to the pound.

The strength and practical benefit of a fence made in the way just described, has been fully demonstrated within my own knowledge, and I can recommend it in the confident belief that it will fully answer the most sanguine expectations.

If the ground be wet and springy, or a heavy clay soil, in which the posts when set will be liable to heave, and eventually be thrown out of the ground, the better way will be to dig a ditch at once, two feet and a half deep, and set the posts into it, at proper distances, and fill up the ditch with small stones; or, if they are not convenient, lay in the tile pipes in the same manner as for a common tile underdrain. Or, if neither can be had, brush or bits of rail, or anything placed in the bottom of the ditch that will lead off the water, will answer the purpose; observing, at the same time, to have a free outlet for the water at all points where it may collect in the lowest ground. This, with the small embankment, and its ditch on each side, will effectually secure the posts from ever being raised out of ground by the action of the frost. The ditch can be made almost, or quite as cheap, as to dig the post holes separately, and at the same time you will have a good underdrain.

With reference to the kind of lumber most suitable for fence boards; pine is the best, hemlock next, and these should be sawed full an inch thick. But when oak, beech, hickory, maple, ash, or elm is used, the boards should be sawed much thinner. Five-eighths or three-fourths of an inch is thick enough, for the reason that all these different kinds of wood will warp very much in the sun; and if thick, say an inch or more, there will be so much strength in them that they will draw the nails or split in warping. But if thin and narrow, they will keep their places much better, and are sufficiently strong for all practical purposes.

DANIEL A. ROBINSON.

Cayuga Co., N. Y., 9th mo., 1859.

Advertising Information—Gratis....VIII.

During the past few weeks of our business season, we have had little time to devote to investigating the operations of the advertising fraternity; nor have we thought much attention to this subject needed. The revelations already made in these columns have pretty well posted up our readers in most of the "dodges" hitherto adopted — an indication of the attention awakened by our articles, is found in the fact that they have forwarded to this office recently an immense number of circulars, etc., sent out to various parts of the country, by the humbugging gentry. Our articles have been widely copied or noticed by other journals, and so wide awake have people become, that the swindlers are beginning to find their advertisements less profitable. Until recently, we could gather twenty or thirty suspicious advertisements from the papers in every week; but the number has been greatly reduced lately. We intend to follow up the subject as far as needful, and to be on the watch for new developments, which will, doubtless, continue to come up. We must beg our readers, who have contributed so largely to our stock of materials, to wait a little. Their contributions will be attended to whenever there is a new swindle to be exposed. We will now complete

(*No.* 26. *Continued from page* 6.)

32. OIL PASTE BLACKING.—Take oil of Vitriol 2 ounces, Ivory Black 1 pound, Molasses 5 ounces, Tanner's Oil 5 ounces; mix the vitriol and oil together, and let it stand a day; then add the Ivory Black and Molasses, and stir it well together, till it makes a thick paste.

[*Remarks.*—A year or two since, a man in Connecticut paid $2 for this recipe to a traveling cheat, who exhibited the blacking, and sold the recipe. The purchaser forgot to ask about the "ivory black," and came all the way to New-York to find it. He was referred to this office by some one he called on, and after examining his blacking samples, we had to tell him that, although the blacking would polish boots well, it would ruin the leather, as will any other blacking, which contains oil of vitriol (sulphuric acid, and this is the case with a majority of the "blackings" sold in the country. We always test blacking before buying, by holding it upon the tongue; or better still, by dissolving a small bit of cooking soda in water, and putting a little blacking in. If it boils or ferments, it shows the presence of acid, which is injurious to leather. The molasses often hides the taste of the acid, so that the soda test is better than tasting. We repeat that, though the above preparation makes a glossy blacking, it is *not* a safe preparation for leather.]

33. TO PRESERVE METALS FROM RUST.—Take some melted beeswax and rub it over the article to be preserved. When dry, warm the article again, so as to get off the wax, and rub it with a cloth until the former polish is restored. By this means, all the pores of the metal are filled up, without injury to the appearance, and rust will not attack it, unless very carelessly exposed to constant humidity.

[*Remark.*—A far better material than beeswax is made by melting about three ounces of unsalted lard with one ounce of common resin. This rubbed on metallic surfaces, will preserve them from rust. It is simple, cheap, and effective. Knives and forks, plows, and all implements and tools of any kind may well be coated with it, when laid aside for however brief a season.]

34. BLACK & RED SEALING WAX.—Rosin, Beeswax, Pitch, and Ivory Black, melt together, and while warm, dip your bottle in and set aside to cool. For Red, use English Red.

[*Remark.*—Very definite information! We will supply the lacking instruction as to the amount to be used, viz.: Take rosin (resin), bees wax, pitch, and ivory black, of each a quantity as large as a piece of chalk. Experiment for a week, until you get the right proportions. When you find the stuff still as brittle as glass, then add Venice turpentine, and you *may* get a usable article.]

35. COLOGNE WATER.—One ounce each of oil rosemary, of jessamine, and oil bergamot, 10 drops otto rose, to a gallon proof spirits—mix.

[*Remark.*—This will make *a* Cologne water—we can not vouch for its quality—that will depend upon individual taste, or *smell*. Any scented water or alcohol is called Cologne water, now-a-days.]

36. HAIR RESTORATIVE.—Take one ounce of palma-christa oil, add oil of lavender to scent it; let it be well brushed into the hair twice a day, for two months. An excellent oil.

[*Remark.*—There's every thing in a name—sometimes. "Palma-christa oil" translated into English, means *castor oil*—an excellent oil for physic. If your hair needs physicing "twice a day for two months," don't fail to use this restorative—if not, not.

37. CURLING LIQUID FOR THE HAIR.—Take two ounces of scrapings of lead, quarter of an ounce litharge of gold, one drachm camphor; boil the whole in a pint of soft water for half an hour; when cold, pour off the liquid, and add to it a drachm of the sugar of lead, and a drachm of rosemary flowers; boil these up together, and strain off the liquid, when it is fit for use.

[*Remark.*—If any body's hair would not curl, after such an application, it certainly can have not the slightest strain of African blood in it. But we fear we shall have to send another dollar to find out what "litharge of gold" is. We know that litharge is an oxide of lead, used in drying paint, but "litharge of gold" puzzles us.]

38. EXCELSIOR HAIR OIL.—Take one gallon cologne spirits, 90 per cent proof; add of the oil of lemon, orange and bergamot, each a spoonful; add also of the extract of vanilla, 40 drops; shake until the oils are cut up, then add one and a half pints of soft water.

[*Remark.*—About as good as many of the cheap "hair oils" sold in bottles, we suppose. After the above is "finished," what does it amount to but scented strong whiskey, or diluted alcohol? We suspect this was put in to make up the "fifty methods." Its use on the hair would be of more injury than good.]

39. CELEBRATED TOOTH POWDER.—Prepared chalk, four ounces; alum, two drachms; cream tartar, two ounces; white sugar, one ounce; orris, one and a half ounces—mix.

[*Remark.*—Omit the alum and the cream of tartar, and the above will do very well. Generally, a stiff brush and simple water, or a little hard soap added, is the best tooth cleanser.]

40. COUGH SYRUP.—Take 30 drops of laudanum, 25

drops of ipecacuanha wine, and mix with a desert spoonful each of vinegar and honey for a dose.

[*Remark.*—We hope none of the purchasers of the "fifty methods" have been foolish enough to take the above dose—it is prescribed on the "kill or cure" plan entirely, with rather too much of the "kill" in it.]

41. Universal Liniment.—Take one fluid ounce tincture of opium, and one fluid drachm tincture of iodine -mix.

[*Remark.*—Ask your doctor what *he* thinks of this "universal" affair]

42 Superior Paint for Brick Houses.—To lime whitewash, add for a fastener sulphate of zinc, and shade with any color you choose; for yellow paint, add yellow ochre; for red, add venetian red, &c.

[*Remark.*—The value of sulphate of zinc (white vitriol), in whitewash, has recently been discussed in this journal. The above is nothing more than a common whitewash, with coloring matter added to shade it. The sulphate of zinc changes a part of it to sulphate of lime (Plaster of Paris), and for inside work makes the material stick a little better than the ordinary lime wash. See last volume, pages 118, 136, 197.]

43. Paint for Rough Wood-Work. Six pounds melted pitch, one pint of linseed oil, and one pound of yellow ochre.

[*Remark.*—We can not say as to the above—if good at all, we think there is too little oil prescribed.]

44. Best Varnish.—White wax, 15 ounces; yellow resin, one ounce, powdered; turpentine, one quart; simmer till dissolved; apply with a cloth, and polish with a clean piece of woolen.

[*Remark.*—Better get from a dealer the *kind* of varnish and the quantity required for any particular work.]

45. Leather Varnish.—Boiled oil, 32 parts; Spirits of turpentine, 4 parts; beeswax, 2 parts; resin, 2 parts; venice turpentine, 2 parts; mix and use while hot.

[*Remark.*—We are not "footed up" on the varnish question, and the above may be good for ought we certainly know, but we should want better authorities for it, than the source from whence it comes.]

46. Almond Soap.—Best white tallow soap, 50 pounds; essence of bitter almonds, 20 ounces; melt by the aid of a steam or water bath.

[*Remark.*—An impracticable, costly recipe, we think.

47. Fancy Soap.—Dissolve two ounces of Venice Soap in two ounces of lemon juice; add one ounce oil of almonds and one ounce oil of tartar; mix and stir it till it has acquired the consistency of honey.

[*Remark.*—We fear another dollar must be sent to learn what "oil of tartar" is; we don't know, having never heard of it.]

48. Macassar Oil.—Olive oil, one pound; oil origanum, one drachm; oil rosemary, one scruple—mix.

[*Remark.*—This is probably as good a preparation as nine-tenths of the "Macassar oil" sold in the country—it being essentially sweet oil (olive oil) scented to your liking.

49. Buffalo Oil.—Take best lard oil, and perfume it well with equal parts of oil garden lavender and oil lemon.

[*Remark.*—This we should call hog oil, rather than "Buffalo oil"—but then it matters little. Lard oil, well scented, may be sold under any name you choose—the good quality and the *usefulness* of these market hair oils depends more upon the name on the outside of the bottle, and your faith, than upon the quality of the article inside.]

50. Lavender Perfumed Water.—Two ounces oil garden lavender, one drachm essence ambergris, six drachms oil bergamot. Mix with two quarts and a pint proof spirits.

[*Remark.*—Then this appears to be not a lavender *water* at all, but an alcoholic mixture—pretty strong of oil, and rather costly.]

Though we paid all that was asked, we beg to tender our most grateful thanks to the sender of the "fifty methods of making money;" he only promised us fifty methods, and who says we have not got them; but how unlike the rest of the world, this man, for he generously sends us two more then promised! Here they are:

51. Florida Water.—Half pint proof spirits, two drachms oil lemon, half drachm oil rosemary—mix.

52. Non-Explosive Burning Fluid.—Take 5 quarts alcohol, 1 quart camphene, and 2 ounces pulverized alum; mix, and let it stand 24 hours. If transparent, it is fit for use: if not add sufficient alcohol to bring it to the natural color of the alcohol. The cover of the lamp must fit close, and a tin stopper be kept over the tube, when not in use, to prevent evaporation.

[*Remark.*—We take back our thanks above expressed. This last is nothing more than the common "burning fluid" with the doubtful addition of a little alum.]

And here endeth No. 26. Our readers will do well to preserve this list. If it would not spoil the copy of the paper, we would advise to cut the above 52 "methods" into separate slips, and put them in a box, or shake them up. Then whenever any one advertises some wonderful recipe, just thrust a hand into the box, and draw out one; it will be quite as likely to be useful, as the thing advertised—and perhaps will be the same thing, under a different name.

For the American Agriculturist.

Head Work.

If a man is really a boor he will pass for nothing more, and if he is at heart a gentleman he will pass for nothing less; if he is an ignorant plodder, men will treat him as such, and if his brains are well cultivated, others will not be slow to find it out; so that those who do not command respect, have themselves to blame most. A young man in these days has no more right to have an idle head, than an idle body; neither ought he to so overwork his muscular system that there is no more nervous energy left for the brain, and as a consequence feel so dull and stupid, that he has no desire to open a book. It is preeminently the day of physical science. The Classics are giving way to rocks, and plants, and the elements with which nature performs her wondrous work. The "Study" is changed from the closet to the field, and here the farmer can, and ought to be, even with all. A few text books, and much close, thoughtful observation, will do more towards balancing mind and muscle, more towards making farmers men and gentlemen, than all the harangues on the dignity of their calling ever uttered.

Turn back the leaves of the great book on which you tread, and read in the rocks the history of long gone by creations; Trace the tree from embryo to perfection; observe clouds and storm, wind and sunshine, and find even these erratic visitors of the air subject to law; turn up the soil, and with a chemist's eye mark the changes of the mold under the influence of rain and manure. Carry out these ideas, and see as your brains get used to working, if you don't soon feel the result all over,—a lightness of heart and a sense of equality in whatever society you may be thrown. "Awake thou sluggard, and arise thou that sleepest." Lover of the farm.

Grasses, and their Importance.

The high price of hay this winter, reaching in some places twenty five and thirty dollars a tun, leads us to notice the great importance of this crop The hay crop of 1850 was estimated at not quite 14 millions of tuns, worth in the aggregate at least 150 millions of dollars, and the grass crop from the pastures is worth as much more, making *three hundred and fifty millions of dollars*, as the annual yield of our grasses. This is none the less valuable, because it is mainly consumed at home. Indeed as a rule, it will pay a farmer a larger profit to use up all his grass and hay upon his own premises, than to sell it at the market price. This is the most economical method of increasing the productiveness of his farm. If all the hay be consumed at home, it will make a large heap of manure if it be saved, and this will bring larger crops of hay, grain, and vegetables, to feed yet larger numbers of animals. The outside limit of the productiveness of the soil has not yet been reached by the most skillful cultivators. The hay crop for the country does not average a tun to the acre. Some farms average three tuns, and single acres are known to produce four and five tuns. There can be no doubt, that most farms can double their present yield of grass and hay, to the great pecuniary advantage of the owners. They want more of these crops, and cannot farm succesfully until they have them.

For dry uplands, an occasional cropping with grain and roots, as now pursued, will no doubt be advisable. These crops, however, should be accompanied with much larger quantities of manure. Instead of the ten and twenty, there should be thirty and forty loads to the acre, on poor soil. With occasional exceptions the plow, also, should be allowed to run deeper.—ten, twelve, and fourteen inches, instead of four, five and six. The grasses are as much benefited by a deep loose soil, as other crops. Thicker seeding would also be a great advantage in many cases. Three and four dollars a bushel for herds-grass, and twelve cents a pound for clover seed, seem large prices, and there is a temptation to stint the quantity, which many farmers do not resist. But the best land will not bring a full crop, unless it is well stocked. A half bushel of herds-grass seed, or three pecks of red top is none too much per acre. A man should economize in any other place, sooner then in the seed sowing.—

But the best lands for grass are those which are naturally moist, swales of reclaimed swamps. If these are properly drained, they may be kept in grass without plowing. Lands that have a large per cent of vegetable matter in them, peat and muck swamps, are greatly benefited by a top dressing of fine gravel, or loam from the adjacent uplands. If the surface is cleared of brush, and made smooth, the grass seed may be sown immediately upon the gravel, without harrowing or brushing. The most of it will catch. Even if the ground is to soft for carting in summer, the gravel can be put on when it is frozen. The seed be sown any time in February or March. Draining, so that the water will not stand anywhere within a foot of the surface, is essential to the highest success. Two feet or more would be better still.

Such lands will ordinarily bear large crops of grass, from two to three tuns to the acre, and may be kept in a high state of productiveness, by a top dressing of good compost once in three years. They are worth more for grass than for any other crop, and they will pay better for good husbandry than any other part of the farm. *

For the American Agriculturist.

Village Wastes.

A great amount of fertilizing material may be gathered at this season from the Village. The writer knows of large farms, once poor and exhausted, that have been brought up to a high state of productiveness, by the application of these wastes.—The contents of privy-vaults are the most valuable of those fertilizers, and they are generally to be had, for the carting. They are extensively used in the neighborhood of large cities, for the manufacturing of pondrette, and, when well made, this is a valuable fertilizer. But any farmer, living within a mile or two of a village, can have a home-made article at much less expense. It has a much higher value than stable manure, some estimating it to be worth four times as much.

In cold weather it can be carted without public offence. There are several contrivances for transporting it. One is a common ox, or horse-cart, made as nearly water tight as possible, with a partition in the middle, sliding up and down, like the gate of a mill pond,—This is put in, to prevent spilling, when going up or down hill. Another apparatus, is a water tight box, made of stout pine timber, just large enough to fit inside of the cart. The hind part is furnished with three or four two inch holes, stopped with wooden plugs. The top has a lid, or trap door, just large enough to admit of convenient filling This is closed as soon as the box is filled. The liquid contents may be used to top dress meadows, but a better method is to drop the whole upon a bed of peat, or muck, or even of loam, prepared upon the field which is to be planted next season. One load of these wastes, to four or five of muck, makes a powerful fertilizer.—The box is emptied by pulling the plugs. CONNECTICUT.

Scientific and Practical Talks about Manures....II.

In the previous chapter it was shown that the great bulk of all plants, comes from the air—that the charcoal in a tree or plant, for example, cannot come from the soil, because it does not exist there. (By plant we here mean all kinds of plants that grow—grasses, grains, trees, etc.) We know that some air-plants have no roots reaching to the soil, to extract food therefrom, and that they must necessarily draw their sustenance from the air. With respect to most plants, there is a difference of opinion as to the relative amount of food taken in through the leaves directly from the air, and the proportion received indirectly through the roots. Some even contend, that while the plant food comes mainly from the air, yet that it is all first washed down into the soil by rains and dews, or absorbed from the air circulating in the surface soil. Without discussing this point, we may say that all agree that a *portion* of the plant's food is absorbed through the roots. The object of manuring is to increase the amount of food in the soil to be taken up by the roots, for it is evident that, so far as field crops are concerned, it is not practicable to materially add to the amount in the air, to be taken in directly by the leaves. It is then pertinent to our subject to inquire: What kinds of food are taken into the plant *through the roots?* Where and how are these materials to be obtained most economically? In what form, and how, and when, are they to be applied? To answer these questions, we must first consider

WHAT PLANTS ARE MADE OF.—Take ten pounds of dried wood, or straw, or of any vegetable substance whatever; heat it away from contact with air, and the result will be four to six pounds of charcoal (*carbon.*)* A piece of flesh heated in the same manner, will give a like result, as is seen in the charring of meat. Cover a pile of wood as in a coal-pit, and burn only enough of it to heat the rest, and while you drive off only watery vapor, with a little of an invisible gas (nitrogen,) you will have nothing but pure charcoal remaining, except a little earthy material (ashes,) which would be left if the charcoal were afterward burned in the open air. Precisely the same result would be obtained if you put in the place of the wood, a quantity of straw, or grain, or leaves, in short of any organic (animal or vegetable) material. The whitish vapor escaping is nearly pure water, as will be found by catching some of it in an inverted vessel, as it escapes, or by holding a cold glass or metal over the coal pit to condense the vapor. This vapor is called smoke, but—except when the upward current of air is so great as to carry up unconsumed particles of charcoal, which give a darker color—the so-called smoke is chiefly water, while, as before remarked, only charcoal is left. Burn or char a piece of meat in a covered frying-pan, and you get a bulk of charcoal about as large as the original piece of meat. The same is the case with over-toasted (charred) bread, potato, etc.

These illustrations show that all organic substances—all vegetable and animal matters except the bones—are really and truly made up almost entirely of charcoal and water, with a small quantity of nitrogen which is itself one of the component parts of air—the air we breathe being made up of about 79 parts (by weight) of nitrogen, united with 21 parts of oxygen.

But water is itself a compound body, being made up of 8 parts (by weight) of oxygen, united with 1 part of hydrogen. Now as vegetable substances when heated, are converted into charcoal (*carbon*), water, and air, and as air is made of oxygen and nitrogen, and water is made of oxygen and hydrogen, we arrive at the inevitable conclusion that, with the exception of the ashes, all plants are chiefly made up of four simple substances, viz:

Oxygen—Hydrogen—Nitrogen—Carbon (*charcoal.*)

This is an interesting fact, one which has been proved a thousand times; and it is a fact of importance in considering how to feed (manure) plants. The unscientific reader will find it hard to believe that (with the exception of the ashes), wood, leaves, straw, grain, flowers, in short, *all* vegetables, are made out of *only four kinds of materials*; and stranger still, that these four materials are really only charcoal, air, and water. Yet such is the unquestionable fact.

Illustrtiaon.—That so many kinds of plants, of such varied forms and colors, can be made from so few materials, is scarcely more incredible than that an architect is able to construct such a variety of buildings with only wood, iron, bricks and mortar. To secure the diverse forms, he uses different proportions of the same few materials, and puts them together differently. Just so, a few elements, *differently proportioned and put together*, make up the endless variety of plants and animal organisms.

Take a piece of granite rock, which has in it neither charcoal nor nitrogen, and pulverize it to a fine soil. Then sow some seeds in this soil, and they will produce plants, made up chiefly of *oxygen, hydrogen, nitrogen*, and *charcoal*. The oxygen and hydrogen may come from the water in the soil or in the air; the nitrogen and charcoal (carbon) *must* come from the air, for there is none of them in the granite soil. In such a soil the plants will grow to perfection, and mature their fruit or seed, though they may, perhaps, be of slow growth, and be dwarfed in size. Suppose we now try to hasten the growth, and to increase the bulk or yield of the plants, or of their seed, which is a chief end aimed at in cultivation. How shall it be done? Why, just as we would secure increased growth of flesh in an animal—feed it, give it more elements, more materials, out of which to manufacture flesh.

To *feed* a plant, we manure it—we furnish it with materials to assist or promote its growth. We place at its roots such substances (manures,) as will supply it with oxygen, hydrogen, nitrogen, and carbon; and, perhaps, also, a little of earthy material, required for its ashes. (Some of the scientific teachers of the present day claim that the atmosphere supplies everything but the ashes, and that the earthy elements are the chief things to provide for in manuring. Hence the stress laid upon phosphatic and other mineral manures. We believe this to be erroneous, in part at least, and one object of these articles is to counteract such teachings, and save to cultivators the large sums now expended for such fertilizers. Of this further on.)

If,(besides the ashes), only oxygen, hydrogen, nitrogen, and carbon (charcoal), are needed by the plants, the next question is, whether a manure, to be useful, must contain all of these four elements. Theory would indicate that the abundance of water (moisture) in the soil would always furnish plenty of oxygen and hydrogen; and experience seems to confirm this opinion; so we will only look after the supply of carbon and nitrogen.

The decay and burning of plants, and the breathing of animals, are always furnishing a supply of carbon to the air, in the form of invisible *carbonic acid*. As this substance is readily absorbed by water, theory would indicate that the water in the soil will generally supply the requisite amount of carbon to the roots of the growing plant. And this is partly confirmed by experience also. Yet it is probable that carbonaceous materials, such as straw, etc., when decaying in the soil around the roots of a plant, do really furnish additional supplies of carbon, and hasten growth. Hence one may reasonably conclude that all vegetable substances containing carbon (charcoal) are useful as manures, when they rot or decay in the soil so that their elements can be taken up and appropriated by the roots of plants. And here let it be noted, that, since *all* kinds of plants contain similar proportions of carbon, any one plant will furnish carbon for any other plant. So we manure any plant with any kind of vegetable matter most convenient, if it be matter that will decay and yield up its carbon to the growing plants.

We will next refer to the fourth and last organic element in plant food, viz.: *Nitrogen*, which is, we think, the most important one to be considered.

(To be Continued.)

Where the Hogs are Raised.

Some idea of the immense number of hogs raised and slaughtered at the West, and of the places where they are raised, may be gathered from the table below. The figures will be interesting also, as showing the number slaughtered and packed at the several points named. The table is made out for the year 1858. The reports for 1859 are not yet complete. It is estimated, however, that there will be a decrease of 50,000, as compared with the previous year, though there is a considerable increase at a few of the towns, including Cincinnati, Lafayette, St. Louis, Milwaukee, Madison, etc. The largest falling off is at Louisville, Nashville, Alton, Olney, and Chicago:

HOGS PACKED IN 1858.

Places.		Places.	
Cincinnati	382.826	Weston, Mo.	8,650
Louisville	288,590	Chattanooga, Tenn.	8.500
Chicago, Ill.	172,000	Rock Island, Ill.	8,100
St. Louis, Mo.	57,500	Hunstonville, Ill.	8,000
Madison, Ind.	54,000	Xenia, Ill.	6,500
Keokuk, Iowa	53,600	La Grange, Mo.	6.160
Quincy, Ill.	49,000	Davenport, Iowa	6.153
Muscatine, Iowa	47,000	Frankfort, Ky.	6,135
Peoria, Ill.	45,000	Lebanon, Ky.	5.764
Palmyra, Mo.	39,980	Mount Vernon, Ind.	5 459
Indianopolis. Ind.	33,000	Attica, Ind.	5,100
Burlington, Iowa	32,300	Clinton, Ind.	4.961
Alton, Ill.	32,000	Eddyville, Iowa,	4.955
Milwaukee, Wis.	32,000	Armiesburg, Ind.	4.789
Connersville, Ind	25,000	Washington, Ind.	4,760
Gallatin and Nashville, Tenn.	25,000	Mount Pleasant, Ind.	4,660
Alexandria, Mo.	18,610	Pittsfield, Ill.	4,500
Shelbyville, Tenn.	17.800	Barry, Ill.	4.200
Chillicothe, O.	16,000	Grayville, Ill.	4,000
Lexington, Ky.	15,000	Oregon, Ky.	4.000
Circleville, O.	14,373	Petersburgh, Ind.	3,785
Clarksville, Tenn.	13,973	New Boston, Ill.	3,360
Olney, Ill.	12,785	Newburg, Ind.	3.335
Delphi, Ind.	12,500	Marion, Ind.	3.300
Eugene, Ill.	11,768	Carlisle, Ind.	2,900
Lafayette, Ind.	11,653	New Harmony, Ind.	2,683
Shawneetown Ill.	11,400	Covington, Ind.	2,652
Princeton, Ind.	10,879	Dublin, Ind.	2,525
Pekin, Ill.	10,400	Rockford, Ind.	2.500
Owensboro, Ky	9,513	Hagerstown, Ind.	2,300
Lacon, Ill.	9,500	Lodi, Ind.	1,400
Total			1,619,255

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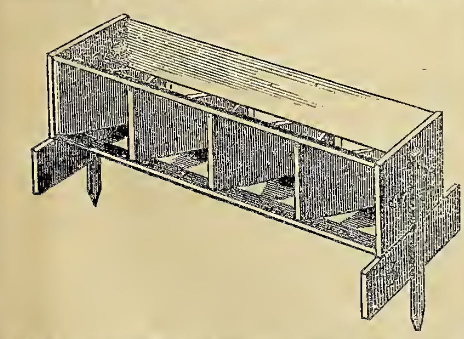
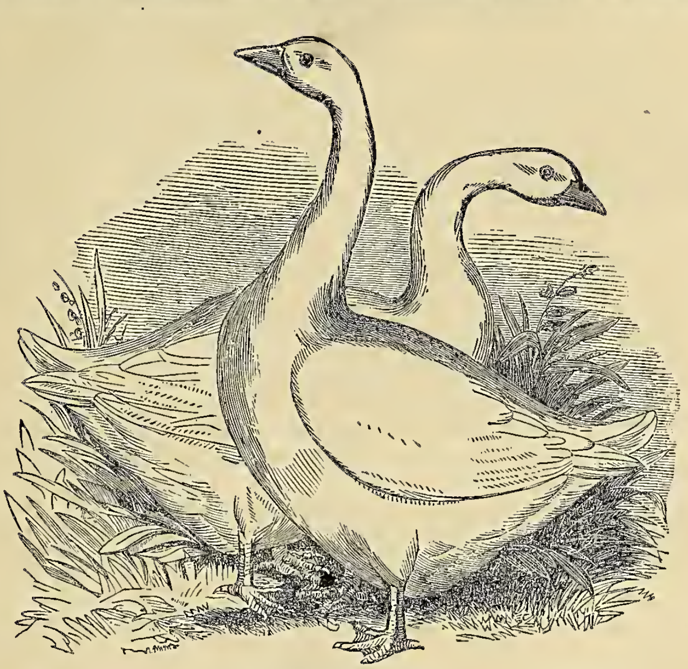
* CARBON, an element entering largely into all living substances, whether animal or vegetable, is seen in its nearly pure state in common charcoal—OXYGEN, an element constituting fully half of the entire substance of the globe, mineral as well as organic, is never seen in its pure, uncombined state, for in this state it is a transparent gas, like air. It enters into combination with other substances, and becomes invisible, just as lime is invisible when combined in mortar.—HYDROGEN, which forms one-ninth part of water, and enters largely into many organic substances, is also an invisible gas, when not combined with some other element — NITROGEN, which forms seventy-nine hundredths of common air, and also enters into many organic substances is likewise an invisible gas when in its pure state.

Teaching Swine good Behavior—A new Hog-Trough.

In the scale of manners, swine stand at zero, so that to call a person "swinish," leaves little more to be said in respect to his behavior. But the pig's disregard of etiquette is not altogether his own fault; he has never been taught better. From his "tenderest years" he has been allowed to "put his foot in the trough," and fight for his dinner. But he is capable of better things. A young friend once taught a pig to walk at a respectful distance from the pail while it was carried to the trough, where he would stand very watchful and very wishful, but not offering to approach, until the pail was emptied, and he was invited to help himself.—A subscriber to the *Agriculturist*, Mr. C. H. Lilienthal—who, although conducting a very large business in this city, still finds time to superintend a flourishing farm—wishing to have every thing done in order, has contrived an apparatus well adapted to secure good behavior in the pig pen at feeding time. The engraving given below we have made from a model, which he exhibited at our office. He disclaims any patent, and hopes everybody who likes it will appropriate the pattern without "fee or reward." It is made in two separate sections, *a*, and *b*. The lower part, *b*, resembles an ordinary plank trough, made by joining the edges of two planks at an angle, and nailing a piece of plank on each end. An upright strip, having its lower end sharpened, is fastened to each end of *b*. These are to be driven into the ground to hold the trough steady; they also serve to keep the upper section in its place, by means of an iron pin inserted through the top, as seen in the cut. In the upper section, *a*, the end pieces are about a foot high; boards, the length of the trough below, are framed into these, inclining towards each other, so as to leave an opening of say an inch between them at the bottom, thus forming a kind of open trough, or funnel, through which the food is poured. Short upright boards with deep notches cut to receive the upper trough, are nailed *diagonally* across its lower part, their edges being joined, so that when the whole is set on the part *b*, alternate compartments are formed, each large enough to receive an animal's head only. It will rest more firmly, if the lower edges of the ends of the cross pieces are beveled slightly to fit a little way down into the sides of the lower trough. The opening in the upper trough being narrow, apples, potatoes, etc., which might choke the pigs, are kept from passing through until chopped fine with a spade or other implement. The contrivance is ingenious, cheap, and portable, and can be made with a saw and hammer, by any one having very little skill in the use of tools. The extra labor and pains required to make such a trough, will be fully compensated by the ease with which each pig can be kept in place. There is also a gain in the weaker animals being permitted to enjoy their meal without the molestation by which they are often kept lean and hungry. The trouble of keeping back the hungry crowd is also in a measure avoided.





Bremen or Embden Geese.

[The following article with the illustration, was prepared for the *Agriculturist* in December, but crowded out of the January number. While making up this page we chance to notice in a recent number of a Western journal a somewhat similar article by the same writer, but without the accompanying illustration. This can only be accounted for by the conjecture, that the writer must have supposed the article would not appear in the *Agriculturist*, and therefore sent it to another journal.—Ed.]

The common grey or mottled goose has hitherto, with but few exceptions, formed the general stock of this country. The degeneracy occasioned by breeding in-and-in, with neglect of proper attention when young, have in many instances so reduced their weight at maturity, that they fall short of a Brazillian or Muscovy drake; and a corresponding depreciation of the flesh in both texture and flavor, is the consequent result.

The ganders are usually white, or have a preponderance of that color, while the geese have various shades of ash-grey and dull leaden brown mixed with it; a preference is often expressed for those that have no white whatever, excepting only on the lower part of the body.

The common goose, however, having no distinguishing features, either in form or plumage, beyond the inferiority of the one and the irregularity of the other we may now pass on to the

Bremen or Embden Geese, which have usually been called Bremen geese in this country from the name of the place whence they were imported. English writers call them "Embden Geese." They were originally from Holland, and the appellation "Embden" was derived from the town of that name in Hanover. Beyond their great size, and the uniform clear and spotless white of their plumage, we are at a loss for any sign of a specific difference between these and our ordinary common goose. In figure they are alike, and the bill and legs are of the same yellow and reddish hue.

Utility is the one object to be regarded with all varieties, even to the comparative exclusion of the color of their plumage, save only so far as is requisite in indication of the breed. Great size and weight, early maturity, and hardihood in their youth, are the points that mainly concern their owners, and render the settlement of accounts a satisfactory proceeding.

In these points the writer claims pre-eminence for the Bremen or Embden variety. One of their advantages is this, that all the feathers, being perfectly white, their value, where many are kept, is greater in the market than is ever the case with "mixed" feathers. In weight too, these birds have an advantage over all others, with the exception of the African or Hong Kong. All white poultry are considered to "dress," that is pluck, of a clearer and better appearance than colored birds. The quality of the flesh, too, is very different from that of any other variety. It does not partake of that dry character which belongs to the other and more common kinds, but is tender and juicy as the flesh of a wild fowl. Owing to the quiet domestic character of the Bremen geese they lay on flesh rapidly; they never stray from their home, the nearest pond and field satisfying their wants, and much of their time is spent in a state of repose. An objection to the Bremen geese is their inclination to commence laying at an earlier period than this northern latitude favors, which is in the latter part of February or first of March. They sit and hatch with more certainty than common geese; and frequently rear two broods in a season, the young ones proving as hardy as any with which I am acquainted. The Bremen goose has prominent blue eyes, is remarkably strong in the neck, and the feathers from near the shoulder to the head, are far more curled than is seen in other birds. C. N. Bement.

Springside, Dec. 1859.

Why the Hens do Lay?

Mr. Editor: In the January *Agriculturist*, you have pretty well answered Mr. Angell's question "Why (his) hens *don't* lay." I have a neighbor whose hens *do* lay, though he uses no patent "hen-persuader"*, and his fowls are the common old fashioned biddies—of which he keeps, on an average, only eight or ten. The first year after buying his stock, he had one hundred and five and a half dozen eggs (1266), besides forty-two chickens. By taking good care of the latter he reared every one of them.

As he cultivated no land that year, he had to buy nearly all the food for his poultry. Next winter they laid eggs quite regularly, all through the cold season. He used simply these measures to promote their laying: he fed them regularly, kept them comfortable by allowing them free access to a warm dry cellar, supplied them with pure water, gave them occasionally a lot of pounded oyster-shells, sprinkled fine gravel on the cellar floor, and varied their food as much as possible. He also made enticing nests for them, and made their roosts so that they could get up to them on convenient ladders without much flying.

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* A subscriber not long since wanted a description of the "hen-persuader," so often referred to in the papers. We believe it was the invention of a facetious editor of the Springfield Republican, who proposed to construct a nest with a spring trap-door underneath. When the pullet lays an egg, it of course drops through, and the door closes again. Poor biddy, on looking round, sees no result of her effort, and down she sits and lays another egg and so on. The editor aforesaid was in ecstacies at first, but he afterwards condemned his own invention, for he put a valuable pullet upon the "persuader" one morning, and forgot her for a week, when on going out he found nothing but a few feathers—the pullet had laid herself all away! So *he* tells the story.

To the above, I will add another thing. He saved the droppings of the roosts in barrels, for use in his garden. He put a quart of hen manure into a tub of water, and made a powerful fertilizer for all growing plants. That man keeps hens to a profit, and others may do so. (Not) Burnham.

* * *

How Charcoal is Prepared for Market.

"Ding-dong, ding-dong, charcoal! charcoal! charco-o-o-o-l! here we go." This familiar cry we heard just now in the street from an immense carryall, and with the thermometer at zero this morning, the charcoal man is likely to have a brisk market.

The burning of wood for charcoal forms an important item of business among a large class of small farmers, in almost all parts of the country. It is carried on most extensively in well wooded regions too remote from market to make it an object to cart wood. The coaling of the wood greatly reduces its bulk and weight, so that it can be profitably carried ten or fifteen miles to market, when it would not pay to carry wood half the distance. Many farmers who own large tracts of woodland on mountains, or in districts remote from, but not at too great a distance from cities or villages, find this the most available method of realizing money from their forests. The wood is worth little as it stands, either for fuel or for timber. Condensed into charcoal, it is readily transported and pays a handsome profit. The business is followed in the intervals of farm labor, and turns to good account time that would otherwise be of little value, or perhaps wasted.

Sometimes men follow this as a business. They locate within a dozen miles of a city or village, where coal is worth from ten to fifteen cents a bushel. They either buy the woodland, and sell again when it is cleared, or buy the wood standing, without the land. An ax, a pair of horses, and a coal cart is about all the capital that is needed to start the business.

Preparation of the Wood.—Any kind of wood will make charcoal, but there is a great difference in the quality of the article prepared from different woods, much more than is usually made in the price. The kinds selected are usually those least valuable for fuel, especially in the districts where the carting of hickory and oak can be made profitable. Chestnut, maple, and birch, are usually selected where these varieties abound; but any thing is taken that is not considered more valuable for wood or timber. A good deal of pine is used, but it makes the poorest charcoal. Basswood and chestnut also make poor coal. White birch and maple are much prized by blacksmiths.

The wood is first cut into billets of four feet, and if hired done, is let out by the job, and packed up in piles, or corded, so that the value of the labor may be conveniently estimated. If the work is done by the day or the month, the wood is left lying upon the ground as cut. The chopping of the wood is carried on at all seasons of the year. Swamps are cut over, and the wood drawn to the coal pit in the Winter.

Putting up the Coal Pit.—Seasoned wood, or that which has been cut at least six months, is preferred, though green wood is often used.

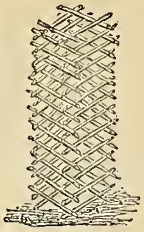


Fig. 1.

The "coal pit" is no *pit* at all, but simply a covered pile of wood upon any dry level spot in the forest. A place is usually selected as free from stones as possible, and where the soil is deep, to furnish loam for the covering. The first work is the chimney, which is made of billets of wood, about two feet long, and put up in the form of a cob house, as seen in fig. 1. It should be raised four feet or more, at first, so as to be out of the way of the first tier of wood. The chimney should be made of well seasoned wood, and it is a good plan to use old coal brands around the bottom which will readily take fire, when the pit is ready for burning. The cordwood is set up in a circle all around the center of the pit. The largest sticks are selected for the inner part of the pit. No sticks more than six or eight inches through should be put in. Logs of greater size should be quartered. The workman packs up the wood endwise, as seen in fig. 2, going round the heap, and keeping it as nearly in a circular form as possible.

Whether a second or third tier of wood is used depends upon the quantity to be burned. The aim should be, to keep the pit nearly in the form of a half globe, a little sharpened at the apex or top. Any quantity of wood may be burned, from five cords to a hundred in a single pit. From twenty to sixty cords will make a pit of convenient size. The outside of the pit is finished off with the small wood or trimming, making the surface as smooth as possible, to shed off rain.

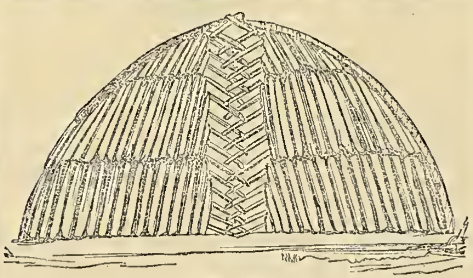


Fig. 2.

The Covering.—The object of this is to keep up a slow combustion, driving off the water and gases from the wood, without reducing it to ashes. The more perfectly the air can be excluded during the burning process, the less loss there will be. The pit is first covered with forest leaves, or with any cheap hay or litter, to prevent the earth from sifting down into the wood. A plow is then run around the pit, breaking up the sods two or three yards wide. The sods are put grass side down upon the leaves, or litter, and the loose earth is thrown on top of these with the shovel, making a covering six to ten inches in thickness. The chimney is left uncovered, and holes are left for ventilation around the bottom in six or eight places, half a foot in diameter. See fig. 3. The holes are shown too large here.

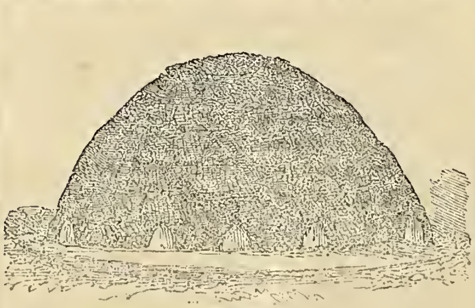


Fig. 3.

The Burning.—The Summer months are considered the best for this process, as the fires are more easily managed, and there is less waste of wood. It is done, however, at any season of the year, except in the coldest weather—as the burner has to be up frequently in the night, and to give the closest attention to his business, which would be very uncomfortable at this season.

The pit is fired by putting blazing brands into the top of the chimney, and letting them fall to the bottom. All the apertures are left open, until the wood is well caught, when the chimney is stopped. The burner will now show his skill in keeping up a steady, slow, combustion, until the whole heap is carbonized uniformly in all its parts. He has some power in hastening or retarding the burning, by means of his ventilators. If the fire burns too much toward the wind, the apertures must be closed upon that side. The process of carbonization is first completed in the middle and on the top of the mound. It should then be conducted evenly down on all sides. The vapor from the wood first passes off in a thick, yellowish smoke. After this, the smoke becomes of a lighter hue, and then black and dense, giving out the smell of pyroligneous acid, which grows stronger to the end of the process. As the process is completed, a light blue smoke is given off which finally ceases. The length of time taken to burn a pit, depends somewhat upon the condition of the wood, green or dry, the size of the pit, and the skill of the burner. As a rule, the slower the process, the more charcoal in proportion to the wood. A pit of three hundred bushels of coal should have at least six days for burning. Sometimes large holes in the covering will drop in, as the wood consumes beneath. These may be stopped by throwing in a few billets of wood, and immediately covering with fresh earth. The burner walks about the mound, using the hoe and the shovel in stopping cracks as they appear.

Drawing Out.—The pit stands a day or two after burning, to cool off. The coal is then drawn out with a rake, the earth that formed the covering falling down to the bottom. The sparks of fire that are left in the coal are put out with water. The utmost vigilance is required in this operation, as a little neglect would expose all the coal drawn out to a total loss. On this account it is always desirable to have the pit near a well or brook. The drawing out is usually attended to in the evening, when the fire is more easily seen, though it can be done during daylight.

The yield of coal from a given amount of wood depends somewhat upon the dryness of the wood, and the time of combustion. The more water there is in the wood, the more fuel must be burned to expel it. Hence there is very great economy in using well seasoned fuel for this purpose. A common yield is a hundred bushels of coal for three cords of wood; chestnut, oak, maple or birch. A skillful burner under favorable circumstances, will sometimes get forty or fifty bushels to the cord. A common charge for burning, after the wood is delivered at the pit, is two dollars and a half a hundred bushels. As the producer of charcoal seldom gets more than ten to twelve cents a bushel, and often less, after carting to market and peddling it out, it will be seen that it is only where wood is very cheap that he can make it profitable.

* * *

"Captain, what's the fare to Saint Louis?" "What part of the boat do you wish to go on—cabin or deck?" "Git out with your cabin," said the traveler; "I live in a cabin at home; give me the best you've got here."

Good intentions will not justify evil actions

Blinks from a Lantern.......XVI.

BY DIOGENES REDIVIVUS.

HOW THE FARM IS DEPOPULATED.

Nothing is more common in the rural districts than to find townships and parishes, where there has been no increase of population or wealth for the last fifty years. In some places there has been a decrease, the sanctuary is closed, the school-house is not opened except in Winter, and everything wears the air of desolation. The farm-houses only show glimpses of the coat of paint that was put on in the last generation, and the barns reveal their scanty stores and diminished stock, through many a gaping hole and unhinged door. The bucket is not only moss-grown, but leaky, the curb is shattered, and the well-sweep is decaying. The garden fence is mended with brush, briers every year usurp a wider domain under the wall, and the weeds increase in variety and luxuriance as useful plants die out. The boys and girls, long before they reach their majority, desert the homestead in quest of fortune in the city or village, upon the prairie, or on the sea. This very common fact is little understood in the region where it most frequently occurs, and the parents are not able to conceal their astonishment that they can not keep a single child at home to take care of them in their old age. My lantern must throw a little light upon this dark spot in farm life.

Joe Sedgewick lives in one of these blighted neighborhoods, and is now with his wife, hard on upon seventy years of age. They have managed to raise up a family of seven children, four sons and three daughters, not one of whom is left with them, or settled in their neighborhood. A grandson born and bred in the city, with the prospect of full possession of the farm at no distant day, has been induced to take up his abode with the old folks, and smooth their pathway to the grave.

The senior Sedgewick has always been an industrious man, having been educated in that school of morals which teaches that the chief end of man is to work. His farm was not paid for, and he felt that it was incumbent upon him to take no rest or recreation, until that honorable object was accomplished. He worked early and late at his business, hiring but little labor, and that only in the Summer. He was up at four in the morning, the year round, taking care of cattle, fattening swine, carting wood, plowing, planting, mowing, and gathering in the harvests.

As soon as young Joe was big enough to mount a horse, he was put upon old Dobbin, to plow out the corn for hoeing. This was very entertaining for a bright little boy of six years, for a while, and he almost felt like a man, as the light pull of the rein guided the horse to the right or left, according to his will. But as the long, hot days of June came on, Joe began to get tired before noon, and sometimes the little fellow got asleep in his saddle. For this he was scolded, and sometimes pelted with a sod. His legs ached at the unequal motion of the horse, and the jerking of the plow, and it seemed to him that the corn rows grew longer every day that he rode. He was put into the field to plant and hoe as soon as he had strength for the work. His childhood ended when he was about ten years of age, and he never had any youth. The senior Sedgewick did not believe in play for his boys; could not conceive that a rational being had any strength to waste in such nonsense, when work would bring money. This could not, however, be wholly prevented. While the boy was at school, he indulged in the sports of the play ground, ball, goal, hide-and-seek, sliding and skating. This was such a contrast to the all-work life of the farm, that Joe grew fond of his books. The school-house was a sort of palace to him, associated with bright faces, sunny smiles, and the gladsome shouts of children. It was a sad day to him, when the Winter school closed, and he began the Spring work. For eight long months, there was to be no relaxation, no visiting, no fishing, even on rainy days, for his father always had work for stormy weather, sometimes under cover, but quite as often in the soaking rain. The lad did not murmur much at this, for his father worked, and the hired men worked, and it seemed very manly for a boy to do likewise.

But his boyish nature craved occasional play-days, something pleasant to look forward to, when the hoe and the plow might be forgotten. He had learned to read, and got occasional glimpses of the few books in the household. But his father did not fancy the bookish tendencies of his boy, and always contrived to keep him as busy as possible in the evening, so that he could not read. Sometimes it was shelling corn, sometimes it was churning or assorting potatoes. But Joe, learning that this was the settled policy of his father, contrived to get tired very early evenings, and put off for bed, where the tow-wick candle lit up the forbidden pages, and the boy refreshed his mind, more than his body with sleep.

By the time he was fifteen, these stolen waters were so sweet, that he could no longer endure the cheerless, all-work life of the farm. He was so much set upon books and an education, that his father consented to his leaving home for school. By dint of teaching, and hard struggling he worked his way through college, became a lawyer, and rose to eminence in his profession in the city.

The second son had few of the intellectual tastes of the first, took naturally to work, and was the special delight of the father. But he was kept with a tight rein, and knew as little of play as his brother. He was disposed to remain longer upon the farm, and to make improvements that his father did not appreciate. He had a taste for fine cattle and horses, and always wanted the best calves saved for cows and working oxen. But the butcher also wanted the best calves, and the butcher's purse usually outweighed the boy's arguments. He wanted the steers kept clean, and their horns ornamented with brass knobs, to make them look better, as well as to keep them from goring other animals. He wanted the fences kept in good repair, the brush cleaned up under the walls, the Summer fuel cut and piled in Winter, and all things kept snug around the farm and its buildings. But the father despised these praiseworthy tastes in the boy, laughed at him for his painstaking, and sometimes scolded him for his waste of time upon these unimportant matters. At the age of seventeen, the boy's trunk was packed for the village, where he had found a place in a store, and could keep things in order.

The younger sons following the sisters, had still more cultivated tastes as they grew up. While the father's views of farming remained unchanged, his discipline had relaxed somewhat, and in the garden the children were permitted to carry out their own plans, when it could be done without expense. New fruit trees and vegetables were introduced without his aid or sympathy. He never could be induced to plant an orchard, though he was as fond of fruit as any member of his household. He never gave any attention to the garden, and the flower borders and strawberry beds, the grape arbors, and the rose trellises of the young folks, were his favorite objects of ridicule. He despised every thing like taste in the garden or upon the farm, and in due time, succeeded in emptying his home of his children. This work of depopulation is not confined to the farm of Joseph Sedgewick.

For the American Agriculturist.

How Farmers live down East.

It is an astonishment to our Southern and Western friends, to see so many evidences of thrift and prosperity in New-England where the land is so broken, poor, and stony. Neat, white dwellings, substantial barns, handsome churches, and attractive school-houses, are every-where visible, as if they were a natural growth of the soil. Wealth is somehow squeezed out of land that would not be thought worth plowing in more favored regions.

Upon a petition for the laying out of a new road in the towns of Candia and Deerfield, N. H., before the county court, it appeared that those two small towns with a population of about 3,500 consumed two thousand barrels of flour, seven thousand bushels of Indian corn, and seventy barrels of salt pork, beside their own home grown products. These are agricultural towns, made up mainly of small farmers who till the soil part of the time, and in the Winter and rainy weather, work at shoe-making or some other mechanical business. To pay for these imports of provision, it appeared that they manufactured two hundred and eighty eight thousand dollars worth of shoes—forty per cent of this sum being paid for labor. The most of this amount goes into farmers' families for binding and making. The business is managed by traders or storekeepers, who have the leather cut out in their own establishments. It is then sent out for binding, into all parts of the town, at a fixed price for a given kind of work. It is then returned to the establishment whence it is sent out again, to be made up. This makes every home in the community a busy hive of industry, all earning money without the contaminating influences of large manufactories.

This sort of mixed farming prevails to a great extent in New-Hampshire, and in Massachusetts. The annual shoe crop of the latter State is over forty millions of dollars, and this is but a single item among the manufactures that are carried on mainly among farmers. Those who see our bleak hills and rocky fields, are sometimes inclined to pity us. We like to relieve them of any unhappiness on our account, by pointing to these facts in our internal economy. We raise our own vegetables and fruits, our own milk, butter, and cheese, and most of our meats and breadstuffs. We buy flour with the products of our in-door labor, and have a handsome balance on the right side of the sheet, at the close of the year.

DOWN EAST.

Mrs. Partington says she can't understand these ere market reports. She can understand how cheese can be *lively*, and pork can be *active*, and feathers *drooping*—that is, if it's raining; but how whiskey can be *steady*, or hops *quiet*, or spirits *dull*, she can't see; neither how lard can be *firm* in warm weather, nor iron *unsettled*, nor potatoes *depressed*, nor flour *rising*—unless there had been yeast put in it, and sometimes it would not rise then.

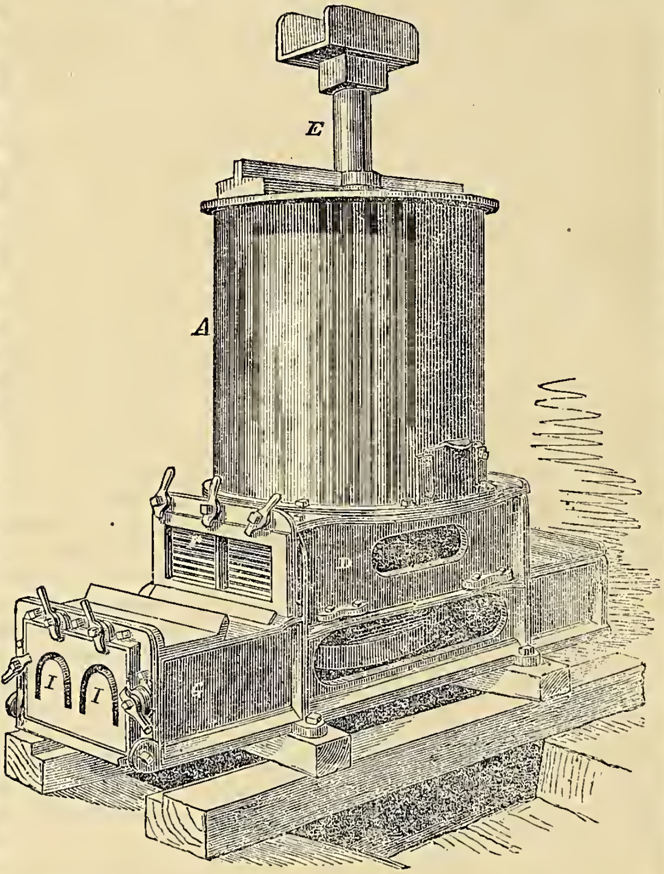
LUCK AND LABOR.—A *guinea* found in the street will not do a poor man so much good as half a guinea gained by industry and economy.

Winegar's Drain-Tile Machine.

The smallest improvement even, in the construction of machinery for manufacturing drain-tiles, is a matter of great importance to the farming interest of the country. We are well convinced that within a brief space of time there is to be a great waking up to the value of under-ground passages for both water and air. To say nothing of the advantages of freeing the sub-soil as well as the surface from standing water, we believe that in very many cases, even on naturally dry soils, it will abundantly pay to construct a system of pipes for carrying air two or four feet below the surface. The advocates of the shallow planting of trees, and of shallow plowing, lay great stress upon the necessity of keeping the roots of plants near the surface, so as to be within reach of the atmosphere. If this be so important, what must be the effect of carrying the air under the soil in pipes, from which it will naturally rise through the soil, so as to give the roots an air-saturated soil, so to speak, three or four feet deep, instead of three or four inches? But we will not discuss this point further here. On page 325 of last volume (Nov. No.) we gave a description of Mattice's machine for making drain-tiles, and recommended it, after seeing it in operation. We now present an illustration of another machine, which, from an examination of the model, we judge to be valuable. We have not had opportunity to see it in actual operation, and can not, therefore, speak so strongly of its working capacity. It is complete in itself—having the mill for grinding the clay, and the apparatus for molding the tiles and all other needful fixtures combined in the one machine.

Description.—*A* is an iron drum, provided within with the grinding apparatus. The clay is put in at the top, and is worked downward. It is driven by horse-power, attached to the upper end of the shaft, *E*. (It may also be driven by steam power.) At each revolution of the shaft a portion of the worked clay at the bottom is forced into *D*, and out through the screen *F*, and falls into the box *G*. The cover then closes down, and a follower or piston forces the clay out through the dies *I*, *I*, in ready formed tiles. They are received upon an endless sheet, not shown in the engraving, where they are cut off into appropriate lengths in the usual manner, as described in our former article, and are thence carried to drying sheds. A similar arrangement of screen and dies is constructed on the opposite side of the drum, so that in reality the machine is a double one in all respects, with the exception of the grinding drum, which feeds both sets of dies. A single revolution of the shaft, *E*, produces two sets of tiles, or six pairs, three on either side. The proprietors claim that they can, and do, make 1200 two-inch tiles per hour with one of these machines. The machine is automatic—every part of it being moved by the turning of the shaft, the only attention required, being to shovel in the clay at the top, and carry away the tiles.

The special advantages claimed for this machine are: 1st, that it is built entirely of iron; 2d, that it is double acting; 3d, that the screen, *F*, which is the part most liable to clog and get out of repair, is here visible, so that every obstruction may be seen at a glance; and also that both the screen and die plate are easily taken off by simply turning the clamps, instead of having to take out screws. As above remarked, we can not speak from personal observation, and only name those points of excellence which are claimed for it by the proprietors, and which appear to be well founded. There is but one size manufactured as yet, and the price for the machine complete—including a full supply of dies of different forms and sizes, receiving apron, etc.—is about $300, we believe. The machine is the invention of Caleb Winegar and Samuel M. Smith of Cayuga Co., N. Y. The patent is now owned, we believe, by Messrs. Winegar & La Tourrette. Any information desired in regard to its manufacture or sale, will probably be found in the appropriate place in the advertising columns.



Another Advocate for Toads.

For these many years we have been constantly pleading for the poor, despised toads. In proportion to their size, toads and wrens are by far the most useful animals on the farm and in the garden. The account with them stands all on the credit side, which can not be said of any domestic animal, large or small—unless you except bees, and they must have some care. But the subject is not exhausted. A great many people have yet to get over their aversion to toads, and to learn to appreciate their usefulness. We therefore cheerfully give place to the following from a distant associate who has not before spoken on the subject we believe. Speaking of the toad he writes:

We set up no plea for him on the score of beauty. His color, proportions and movements are all on the other side. As to symmetry of form, he stands alongside the elephant, though lacking the universal caudal appendage of quadrupeds, to keep up a good balance. He is a very grave, sedate, and silent fellow, seldom seen roving abroad in the garish daylight, but choosing rather the more poetical hours of dusky eve. He is not swift of foot, yet has been known to travel far in twenty-four hours. Hence, perhaps, the old adage: "There's no telling by the looks of a toad, how far he can hop." Speaking of the elephant reminds us to say that the toad has an organ which few persons ever see. It is something like a proboscis, three or four inches long, which he throws from his mouth very suddenly, whenever an insect or worm comes in his way, and snaps up the luckless vermin into his maw. This proboscis lies coiled up in his mouth until such times as it is wanted for use. Naturalists say that it is longer and stronger, in proportion to his size, than the elephant's.

It should be better known than it is, that the toad is a very useful little animal. He hurts nobody, and in the pursuit of his livelihood, is always doing somebody good. He feeds on flies, beetles, and worms of all sorts, and he has a voracious appetite. As many as fifteen beetles have been found in the stomach of a single toad. He dines chiefly at evening, when insects are mostly abroad. It is surprising how many he will catch in a half hour, and how quickly he will dart upon his prey. Probably his dun-brown coat conceals him from the notice of his victims.

As the ant is yearly becoming more troublesome in gardens, it would be an excellent plan to collect toads and put them within our garden fences, to feast upon this intruder. All that they want is some shady place with mellow ground, where they can burrow easily during the heat of the day. By no means should children be allowed to worry and kill them, as they sometimes barbarously do. Nor should fastidious and nervous ladies order them to be driven from the garden lest their serenity of mind should be disturbed. You might as well drive out the gardener himself; the toad is your best friend.

We once heard of a gentleman who advertised for toads to put in his garden, offering a certain sum apiece. He was certainly a sensible and humane man, and a good gardener.

For the American Agriculturist.

"Following Nature."

"It's agin natur," is often triumphantly urged as an end of controversy by the unlearned, and not a few wiser heads have appealed to the way in which "Nature" operates, to confirm or disprove a theory. In a discussion at the Farmers meeting of the Conn. State Agricultural Society, the subject being, "The proper way of applying manures," one advocate of top-dressing, argued in its favor that this is Nature's method, and hence right. Such an application of fertilizers may be best, we are not now commenting upon that point, but the argument used has little force. Nature is not a *cultivator*. She furnishes materials, it is man's province to use them to the best advantage to secure the results he wishes. Nature never plows, nor drains, nor grafts, nor inoculates, nor performs one of a hundred processes whereby man has redeemed land, improved plants and fruits, and made plenty smile where Nature had denied her favors. It is true that lands are fertilized by natural processes, and an arid island may finally bloom with beauty unassisted by man, but he who waits for such results would need the life of Methusaleh, thrice lengthened. Man wants quick returns; he must have a larger yield for his labor than unaided natural processes would give him. Should he leave his grain, his fruits, or flowers to take their own course, he would soon return to savage life, gathering nuts and digging roots for subsistence, and clothing himself with untanned skins. To secure his ends he must often do violence to nature. He must drive the plow-share through her bosom, amputate her luxuriant over-growth, feed her stinted grains into obesity, and torture her flowers into monstrosities before they can supply his wants or satisfy his tastes. Nature's liberality is profuse but undirected; the power confided to her by the Creator is immeasurable but as untamed as the free lightning. She is to work for man, and it is for his science to discover her capabilities and turn them to his own account, and not to blindly follow her lead. She is an indispensable though at times an unwilling servant, often a reliable adviser, but not the infallible teacher that many suppose. ART.

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For the American Agriculturist.

County Fairs and Humbugs.

"Well John, how did the Fair go off?" asked a friend, of a young man who had just returned from the ——— Co. Agricultural Exhibition. "Humbug, like all the rest of them," was the reply. John had attended several exhibitions of the kind during the Fall, and as he is one of a class whom we have often heard pronounce the same unfavorable opinion, it is worth while to learn how he formed it. Let us follow John as he spends the day and his money. Before entering the grounds of the exhibition he is attracted by the sound of music from a tent, and reads from the bill posted at the entrance, a flaming description of a fat woman, a remarkable giant, and a wonderful dwarf; admission 10 cents. He concludes to invest, but speedily comes out, exclaiming, "sold." Next he inspects the six-legged calf, the chicken with two heads, and sundry other monstrosities, with but little more satisfaction. He then enters the enclosure of the exhibition, as he would a menagerie, to see the show—to find something extraordinary to wonder at. Passing thus up and down through the tents, and among the stalls of the cattle, only to "see sights," he finds comparatively little of interest. Here and there he pauses to look vacantly at a monstrous pumpkin, or an unusually fat ox, but is not at all attracted by new varieties of fruit, economical labor-saving machines, or improved breeds of stock. The horses hold his attention a little more fixedly, but unless there is a track and a race, he soon thinks all stupid, and wanders away to where a crowd is gathered around a soap pedler, an auctioneer of "notions," or a sharper with a lottery table. Having amused himself awhile with these at a cost he can ill afford, he leaves, a humbugged man—humbugged by himself—and votes the whole fair a failure and a swindle.

And yet the managers of exhibitions are not altogether free from blame in the matter. They too often connive at, if they do not encourage, the presence of these side attractions, and even in some instances allow them a place within their own enclosure, to "draw" and amuse the unthinking crowd. The purpose of exhibitions is not amusement but improvement; if committees will keep this steadily in mind, they may be sure of the ultimate success of County Exhibitions.

SPECTATOR.

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"Well, Robert, how much did your pig weigh?" "It didn't weigh as much as I expected, and I always thought it wouldn't."

Filtering Cisterns Again.

ANOTHER MODIFICATION PROPOSED AND DISCUSSED.

Pure and palatable water is one of the most important requisites in every household. Water distilled in the form of vapor, and descending as rain, is the purest and best adapted to common use. Living, as we do, where there is little dust, and having a close neat cistern supplied from a high well painted metallic roof, we use for drinking and all household purposes the unfiltered rain water just as it is collected. Instead of being insipid or disagreeable, it is pleasant to the taste,—much more so to those accustomed to it, than the best spring or well water. But where much dust flies, or where the roofs are of wood, moss covered, and subject to be soiled with falling leaves and other matters, it is desirable to have the water filtered. So also, there is very little spring, well, or river water, which would not be improved by filtering, at least for household use.

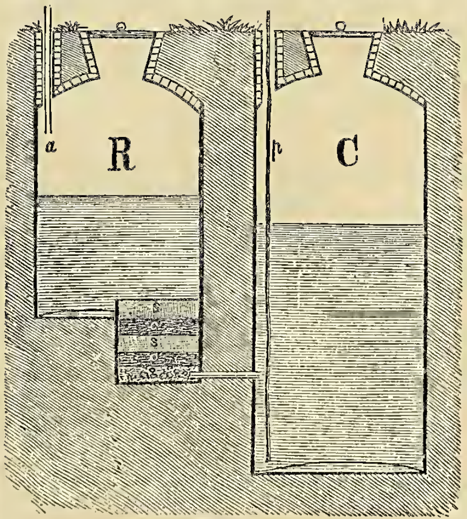


Fig. 1.

We have already described several plans for simple box or barrel filters, and also two forms of filtering cisterns. One of these is that shown in fig. 1, in which the water is received from the roof through the pipe *a*, into the cistern R. It filters through several layers of sand and charcoal, (*s*, *s*, *c*, *c*,) and passes by a pipe into *C*, and is pumped up through *p*. Another form proposed as an improvement, is that shown in fig. 2, in which the water passes from, *R*, *up* through the filter, into *C*. The advantage claimed for this is, that the sediment which in fig. 1 collects upon the top of the filter, would in fig. 2 settle down, leaving the bottom of the filter always clean and effective—it being understood that beneath the lower layer of sand there is a perforated board covered with a piece of flannel to support the sand. (This is not shown in the engraving.)

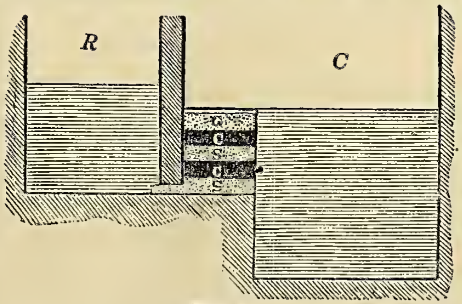


Fig. 2.

We now have still another modification proposed by Mr. C. Briggs, of Kings county, N. Y., which, after a trial of it, he considers an improvement upon either of the foregoing. The lower section of the cisterns is shown in fig. 3. The water is received from the roof into *R*, as in fig. 1. At the bottom of this, in the center, is placed a box *F*. This box is filled with several alternate layers of sand and charcoal, (*s*, *c*, *s*, *c*,) the bottom layer being coarse sand, or fine gravel. Between each layer is placed a sheet of cotton-flannel. The top of the filter is covered with a plate of galvanized iron to keep the sand in place. This iron-plate is punctured with small holes to admit the water. A water-tight partition is made from one side of the filtering box to the wall of the cistern, leaving the open chamber *O*. The lower side of the box next to *O* is left open, the gravel being kept in place by a piece of the cotton flannel which lines the box on all sides, passing round under the bed of gravel. The filtered water passes through the open pipe shown leading from *O* into *C*.

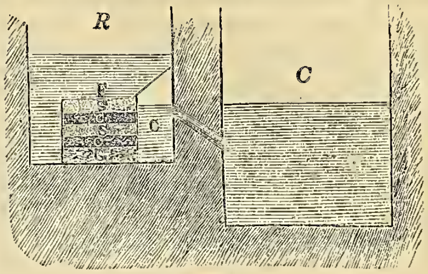


Fig. 3.

The advantage claimed for this arrangement (fig. 3) is, that any sediment remaining in the filtered water settles to the bottom of *O*. This plan does not, on examination, appear to be an improvement upon fig. 2; for in the *first* place there should not be any sediment in *O* if the water has been well filtered in passing through the box *F*; and *second*, this arrangement has the same objection as fig. 1, viz: the sediment from the unfiltered water would collect upon the top of *F*, and after a time choke it, and require drawing off. Of the three kinds here described, w should therefore prefer that of fig. 2.

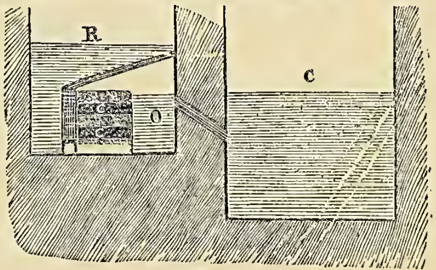


Fig.

We will, however, propose in fig. 4 still another arrangement combining the advantages of fig. 2 and fig. 3. Construct the filter similarly to fig. 3, but put a layer of gravel or coarse sand at the top, and finer sand for the bottom layer. Let the bottom be made of punctured galvanized iron, or with a perforated board, placed a few inches from the lower side. Let the right side, next to *O*, be closed, and cut away part of the lower left side so as to admit the water freely. Let the tight partition extend from the cistern over to the left side of the filtering box. The water will then pass in at the left, and *up* through the filtering materials, and thence over into *O*, and through the open pipe into *C*. The sediment in the unfiltered water in *R*, will fall back from the bottom of the filter, leaving it always clean and effective. If any sediment chance to wash through the filter, it will then settle into the bottom of *O*, as described in fig. 3. The advantages of fig. 4 over fig. 2 are, however, hardly enough to pay for the extra labor and expense of the construction.

Other plans will doubtless suggest themselves to different persons, but whatever form may be adopted, we advise every person to construct some kind of apparatus, or at least to use pure rain water, and discard spring, well, brook, river, or pond water, unless filtered.

Valuable Experience with Clover in Renewing Worn Out Land.

To the Editor of the American Agriculturist

In the Winter of 1848 I purchased six acres of land which lay adjoining my farm, and which the former owner had pronounced almost worthless, from the fact that it was, as we farmers term it, "run out." It lay at the extreme end of his farm, and a piece of woodland lying between that and the rest of the farm, with a steep hill to ascend, made it impossible to get manure to it, at least so he thought. He had cropped it with rye for several years, until it would not produce enough to pay for the labor bestowed, his last crop being but five bushels per acre. This so discouraged him, that he offered to take ten dollars per acre for the piece. I bought it, thinking that I could bring it to its former fertility, which was sufficient to raise 40 bushels of corn per acre. In the Spring I sowed six quarts of the large kind of clover seed to the acre, and let it lie that Summer, turning nothing on it. The clover took as well as could be expected on such land. The next Summer it came on a little better, and would have been perhaps a third of a crop had it been mowed; but as soon as it was well in the blossom, I plowed it under, and about the first of September sowed it to rye, seeding to clover again in the Spring. The result was nine bushels of rye per acre, which was so much better than I expected, that I resolved to continue the process. In 1853 the clover was considerably better than before, and in July I turned it under again, sowed and seeded as before:—produce 12½ bushels to the acre. Performed the same operation in '55 and '57, with the following results: in '55, 15 bushels, and in '57, 22 bushels to the acre, when I considered the land strong enough to bear corn.

Accordingly I let the clover grow, and in October turned it under to plant to corn next season. The rye was always threshed in the field, and the straw stacked and left until the next crop was sown, then spread on top just before the ground froze, which, in a measure, prevented the rye from heaving out.

It is true that I have not derived any benefit from it except what rye it produced over and above the cost of cultivation, but the increase in the value of the land will more than pay all expense, for the former owner has offered me $30 per acre for the piece. I have never pastured it one week since I have owned it, so it is an easy matter to come at the profit or loss in the speculation. "Farmer Boy."

Oak Hill, N. Y.

Remarks.—The experiment of "Farmer Boy," and its results, like that of "Squire" Bunker given in the January *Agriculturist*, should be carefully studied by the owners of "worn out" lands. To make it as clear as possible we have re-arranged the figures sent by our correspondent, placing them in tabular form.

		Dr.
Cost of cultivating and harvesting 6 acres rye 4 years, @$6 per acre, per year		$144
Clover seed and sowing		44
Interest and taxes on land 10 years		50
Total cost		$238
	Cr.	
350 bushels Rye at average of 70c	$245	
Increase in value of land	120	—$365
Clear Profit		$127

This would be $12.70 per year, or about $2 per acre, which is a profit of 20 per cent on the investment, over the regular rate of interest.

Perhaps some skeptical anti-book farmer may say "All very well, and easily done, when you can buy land at such a bargain, but you could get no such figures from land at $30 per acre. Let us see what may be done. "Farmer Boy" obtained for the first crop, 9 bushels per acre; 2d, 12½ bushels; 3d, 15 bushels; 4th, 22 bushels—an average increase of over 4 bushels per year. Should the same course be followed, it would be safe to calculate upon an increase of 4 bushels per acre for the next crop, making the yield 26 bushels per acre. The account would then stand

	Dr.
Cost of cultivation (1 acre)	$6
Clover seed and sowing	5
Interest and taxes two years	5
Total cost	$16
	Cr.
26 bushels Rye worth at least 75c. per bush	$19 50
Profit	$3 50

near 12 per cent on the investment after paying for legal interest, labor, etc. A result that can, and ought to be obtained, by a rational system of farming.—Ed.]

How Tobacco is Grown and Prepared for Market.... I.

Tobacco stands next to cotton, among the exports from the Southern States. It very early attracted the attention of planters, and in colonial days, before the development of cotton manufactures, it was a main reliance for export, and indeed, to some extent, served the purpose of currency. The price of a month's work, a bushel of corn, a cow, or a horse, was so many pounds of tobacco. As it is reckoned among the luxuries of mankind, there has been no such rapid increase in its production as in the case of cotton. There has, however, been a steady gain in its use, and notwithstanding its well known injurious effects, and the war made upon it by the medical faculty, it is chewed, smoked, and snuffed in ever increasing quantities. The exports which in 1855 were put down at fourteen millions of dollars, have reached this year twenty one millions, and this is but a part of the product of the country. The principal tobacco growing States are Maryland and Virginia, and the States lying immediately west But it is grown in considerable quantities in all the other States, and forms an important crop in the valley of Connecticut river. It has been cultivated to a considerable extent in that region from the earliest days, and the variety known as Connecticut seed leaf, used chiefly for wrappers, commands a high price in the market. Indeed, we suspect that a large part of the Havanna cigars consumed in our city, are grown on the soil of the nutmeg State.

SEED AND SEED BEDS.

The practice of transplanting is universal in the cultivation of this crop. Much therefore depends upon an abundant supply of good, strong, healthy plants. To make sure of success, every planter should grow his own seed, saving the strongest early plants for this purpose. The seed, if not "the least among herbs," is exceedingly minute. It is said that twenty-five hundred, furnishing plants enough for a half acre, will lie upon a half-dime. It is of the utmost importance to have good seed, as the loss of a few days at the critical time of sowing, will make the plants too late for a well matured crop. The vitality of the seed may be tested by putting a few from the lot into a lock of moist cotton, to see if they will germinate. It is said that seed kept five or six years, will sprout sooner than fresh seed; but this we regard as one of the old wives' fables with which our agriculture is still encumbered. Well dried seed of the last year's growth is quite certain to germinate. It is the practice of some of our best cultivators to sprout the seed designed for sowing, before putting them into the bed. This is done by taking two or three quarts of wood mold, or any other very fine soft soil, and mixing the seed very thoroughly with the whole mass. It should then be moderately moistened, and kept in a warm room four or five days previous to the time of sowing. This course enables the sower to distribute the seed more evenly over the bed, and as they are already sprouted, they come up before the weeds, and keep the start of them.

It requires but a small quantity of seed to supply a large plantation. The more sparsely and equally the seeds are distributed, the stronger the young plants will grow. The rule is about a thimble full, or a pipe bowl full, to a square rod, and this quantity of ground ought to furnish plants enough for an acre.

The seed bed should be prepared in a very thorough manner. It may be either with or without glass, according to the circumstances of the cultivator. Where the season is rather short for this crop, as in places north of this city, it is an advantage to start them under glass, in the same way as cabbage plants. If without glass, a spot should be selected upon the south slope of a hill, or in some sheltered spot where it will have the full benefit of the sun. The bed is prepared early in the Spring, by cutting up the brush, grubbing up the roots, and burning a large pile of brush upon the spot. This furnishes a large supply of wood ashes, which is one of the best fertilizers for this plant. If a fresh virgin soil is not at hand, the want may be supplied by working in a heavy dressing of compost, or yard manure, into any piece of land that is convenient. In this case it will be a good plan to burn brush on top, as it kills the seeds of weeds, makes the soil fine, and fertilizes it. If brush is not convenient, wood ashes will be a good substitute. The plot should be laid off into beds about four feet wide, for convenience in weeding and drawing the young plants as they are wanted. The surface should be raked with a fine toothed garden rake, until all the small lumps are broken. The beds should next be rolled or gently pressed smooth with a board or shovel, to prevent the seed from sinking too deep into the soil. After sowing the seed, the bed should be again smoothed over with the back of the rake, and gently patted down with the shovel or board. All this care is necessary, that the seeds may not be buried beyond the reach of the sun's rays. Unless the seeds have been previously sprouted, they come forward very slowly, and it will be six or eight weeks before they become large enough for transplanting. It is a good plan to wet the beds occasionally with a weak solution of guano, about a pound of guano to a barrel of water applied at evening after the liquid has stood all day in the sun.

After the young plants show themselves, the beds should be closely watched for weeds. Where the plants are too thick, they should be thinned out, and the soil should be stirred as often as once a week. The strength of the plants will depend a good deal upon the cultivation they receive while in the seed bed.

SUITABLE SOIL, AND TRANSPLANTING.

It is not all good land that is suitable for this crop. The famous tobacco of Cuba is grown only in a very limited district in the southwest part of the island, and this district is growing smaller from the wretched system of tillage. Formerly the tobacco lands were about eighteen miles from Havanna, now they are one hundred and fifty. In Virginia, and the other States, tobacco of the nest quality is grown upon a light alluvial loam, rich in vegetable matter. Lands recently cleared and brought under the plow, are considered the best. The best crops are secured in mild, warm seasons, with not too much rain. It never can be an object to grow this crop upon wet soils, or in mountainous regions. In the valley of the Connecticut, rich loams, with an admixture of sand, are preferred. If the land is not dry, it must be made so, in order to secure a good crop.

In all cultivated soils, however well adapted they may be to the crop, there should be the most thorough preparation, both in the plowing, and in the manuring. Tobacco, on poor land, will not pay, and all who attempt it will soon discover it. The land should be plowed ten or twelve inches deep, and manured enough to produce a hundred bushels of corn to the acre. It should be thoroughly harrowed, and made into as fine tilth as possible.

The season of transplanting is from the middle of May, to the middle of June, according to the latitude. It should not be done until all danger from frost is over. The best time for the operation is immediately after a shower, or in rainy weather. If the rain does not favor, the plant bed should be thoroughly drenched with water, a few hours before transplanting, and water should be applied after the setting, at morning or evening, as long as the plants droop. The distance between the plants differs somewhat in different localities. As a rule they give more space to each plant in the southern than in the northern States. In Virginia four feet each way is a common distance, and a slight hill is made upon which the plant is set. In Connecticut the rows are about the same as for Indian corn; three to three and a half feet apart, and the plants two and a half to three feet in the row. It is only where the land is made very rich, that it will bear so close planting.

(*To be continued.*)

One of those "Small Plots."

WHAT A MECHANIC DID WITH 30 RODS OF GROUND —TOMATO CULTURE—SUCCESSION OF CROPS, ETC.

We have taken frequent occasion to show how much pleasure, how many real luxuries, and how much profit may be derived from a small plot of ground, not only by farmers, but by mechanics, and indeed by all classes. We are sure that as a general thing the highly cultivated garden pays better returns for the cost of labor, manure, etc., than any other part of the farm. In illustration of what may be done, and also for the practical hints contained, we condense the following from a letter from Franklin Co., Mass., dated Aug. 29, but put on file for reference. The letter was not designed for publication, but as we omit the name, we shall be excused by the writer for the use we make of it. "....I love cultivating the soil so well (though a mechanic) that I can not help loving a true friend and genial companion like the *Agriculturist*, which has done so much to make me wiser and to instruct and entertain myself and family. Yes! the good it has done *me*, for though I only boast of thirty rods of ground, all told, it would do you good to witness the beautiful flowers that cheer with their beauty and fragrance my 'humble home,' for the choicest of which I am indebted to you; and to see also my productive and well ordered kitchen garden (pardon the vanity); and to hear the profundity of my discourse when enthusiastically arguing with the more favored 'lords of the soil.' For all these we are indebted to the *Agriculturist*, as well as for the gratification its household directions, its pictures, and its stories, afford to wife and children. You would be cheered by the interest manifested by all, the little ones included, as the time for receiving a new number approaches.... Though living in a farming country, I know but few *real admirers* of 'the most healthful, the most useful, and the most noble employment of man.' So I content myself with my little garden, and play farming, hoping for the time when it shall be my sole employment....But I find that (with your help) even my play farming is a profitable game. Thus:

I have a small hot-bed 13 ft. by 3½, with which I commence the sport in the Spring, get off a crop of small salads by the time that the tomato plants are ready for their first transplanting, then fill the bed with these little plants. I sold fifteen dollars' worth last Summer, besides having plenty for myself. After they were off, I sowed cabbage seed; May 23, sold the plants for $1.50, and planted cucumbers; had plenty to eat, some to give to friends, and some to sell. The net sales from this little bed were $19, besides $5 worth given to friends and used, estimating them at the same price as those sold. By practising substantially the plan recommended by your Michigan correspondent described in Vol. XVIII (page 142, May No.), I raise finer plants, and consequently get better prices for my plants than those who neither read nor think. I obviate the necessity for the first transplanting thus: When the tomato plants have formed the first rough leaf, I draw a knife along the rows about one inch below the surface, to cut off the tap roots; then I put about one inch of soil between the rows, to enable the plants to form the small fibrous roots.

I have sold from my garden $12 worth of plants and vegetables, and have still plenty left to use and to sell; thus you see my dear friend, you and I together have sold $31 worth from our 15 rods of ground devoted to that purpose; and we have yet to gather our Lima beans, (tardy beans here) several bushels of tomatoes worth $2 a bushel here, 150 lbs. or so, of Hubbard Squash, 30 bunches of celery, 50 heads of cabbage, a sprinkling of Kohl Rabi, etc., etc.; and we have besides almost a load of manure made from the offal of the garden, and we have enjoyed Spring salads, feasted on green peas and new potatoes, (celery on the ground now), reveled in a profusion of strawberries and raspberries; improved our minds, strengthened our bodies, entertained our friends, and pleased and instructed our children. We have already started our cold frame for next Spring, and if there is one thing which we are grateful for more than another at this time, it is for your directions in this department...."

"Hungarian Millet" in Iowa.

To the Editor of the American Agriculturist:

I notice the article on Hungarian Grass or millet on page 355, Nov. No., and cheerfully give my experience with a first crop:

June 17, sowed three bushels of seed on six acres (rain June 19). Seed came up 22d. Cut and stacked Sept. 1 to 10, in the same manner as Timothy. Weighed one load, estimated at ½ tun, but Fairbanks' Scales indicated 1750 lbs, it being much heavier than the same bulk of Timothy. Estimating the whole crop by this load, the six acres yielded thirty three tuns, or 5½ tuns per acre. Nov. 10, threshed the hay with a machine, reserving five tuns to feed out with the seed on; yield 140 bushels of clean good seed, being 28 bushels per acre. Soil very light, some sandy but rich. I am confident a good crop may be secured every year by seeding between June 15, and July 15, there being plenty of time for it to mature after the latter date, on rich well pulverized soil—for example on ground in potatoes the previous year. By delaying to the above dates, all other seeding is done, which is a great consideration. But the all important one is, the land is then dry and warm, and the sun hot, which causes the seed to vegetate at once. Sow without delay as soon as the ground is prepared. As far as practicable prepare the ground one day, and sow, harrow, and roll the next, not waiting to prepare a large field, and thereby give the weeds a start of the grass. I have in part wintered horses and colts on it the last two Winters, and know no reason why it is not as good for stock as Timothy. J. A. GREEN.

Muscatine Co., Iowa, Dec. 1859.

P. S.—It may be of interest to state that in the Fall of 1858, the Hungarian Seed was abundant here at 50 cts per bushel; but in the Spring of 1859, it was raised to $2 50 per bushel; while in the Fall of 1859 it commanded only 62½ cents per bushel. J. A. G.

REMARKS.—The high price last Spring was doubtless owing to the humbug Honey-blade Grass fever, and the large purchases of the Hungarian Millet, by those engaged in that swindle, which we exposed last May. In the Winter we procured some seed for distribution which cost us $2 a bushel here (it cost less than $1 where procured at the West), but before mid-summer it was held at $3@$4 in this city, and was sold in some places at $5 to $6 per bushel.—ED.]

HUNGARIAN MILLET IN RHODE ISLAND.—"Henri," writing to the *Agriculturist* from Shermantown, R. I., states that he sowed ten acres on the 1st of June, and cut about thirty tuns of fodder, which after trial he considers fully equal to herds-grass.

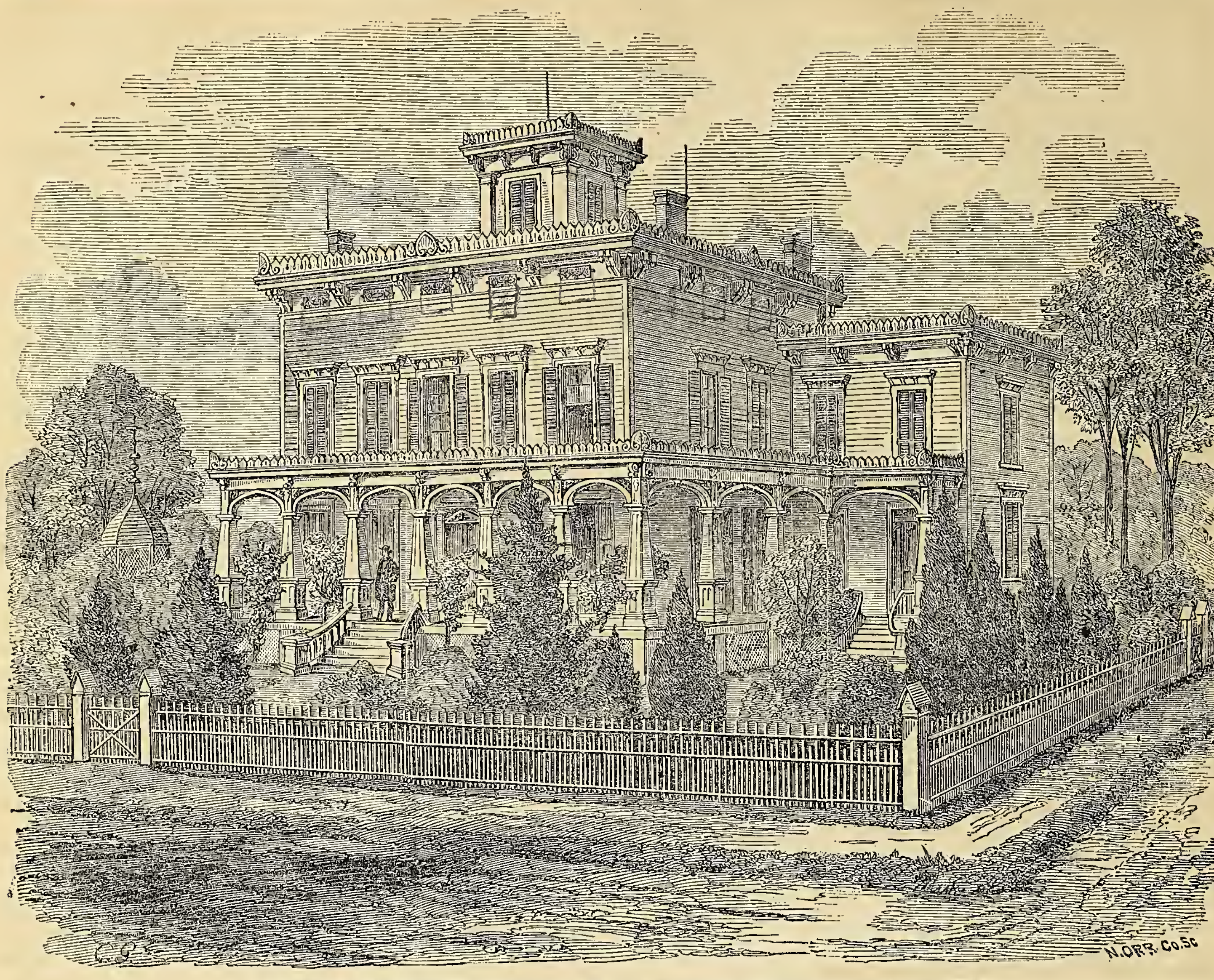
To Prevent Forked Trees from Splitting.

Every year many valuable trees, fruit and ornamental, are destroyed by the splitting of their trunks at the branching of the limbs. Surrounding the tree with iron hoops has sometimes been tried, but seldom with success. Inarching, or grafting the limbs on one side of the crotch to those on the other, has proved more efficacious. Bolting is another remedy, and, if well done, is a good one.

Several years ago, a fine maple on our premises began to split, and we treated it as follows: Taking an auger of suitable size, we bored a hole through the center of the trunk where the split appeared, and inserted an iron bolt of the same size, having a large flat head on one end, and a screw on the other. The bolt having been driven through, a nut was put on the screw-end, and turned up snugly against the tree. Since then, the tree has flourished as well as before, the bark has grown entirely over the bolt-head and screw, and no signs of splitting have again appeared. A hole is sometimes bored, and a wooden pin driven in for the same purpose.

Osier or Basket Willows.

The Connecticut Courant states that Col. Colt, of that place, has raised 35 to 50 tuns of these willows upon the dykes along his premises on the Connecticut river. So well has the experiment succeeded, that he has recently planted 17 acres besides those growing upon his dykes, and next Spring he contemplates adding 50 acres more. He is about erecting a factory which shall give employment to 80 or 100 persons in manufacturing the osiers into baskets, chairs, cradles, etc. Perhaps he will make it pay, we believe others have not generally succeeded well in this country



A COUNTRY RESIDENCE—Homestead of the Publisher—Flushing, Long Island, (N. Y.)

As it is customary to give in this journal, from time to time, sketches and somewhat minute descriptions of various kinds of dwellings, which may be suggestive in plan or mode of construction to those contemplating building, we have thought it not out of place to insert here the accompanying engravings, which were recently presented to the *Agriculturist* as a "New-Year's Gift." And as so beautiful a gift demands from us at least a fitting acknowledgment, we may be allowed to say here, that though we employ a number of different artists, yet whenever we have required an engraving done promptly, and in the best style, we have usually gone to the well known establishment of Messrs. N. Orr & Co., (Nathaniel Orr & S. M. Wood,) 52 John-st. The drawings were executed by Mr. Charles Gildemeister, the successful designer and architect of the Crystal Palace.

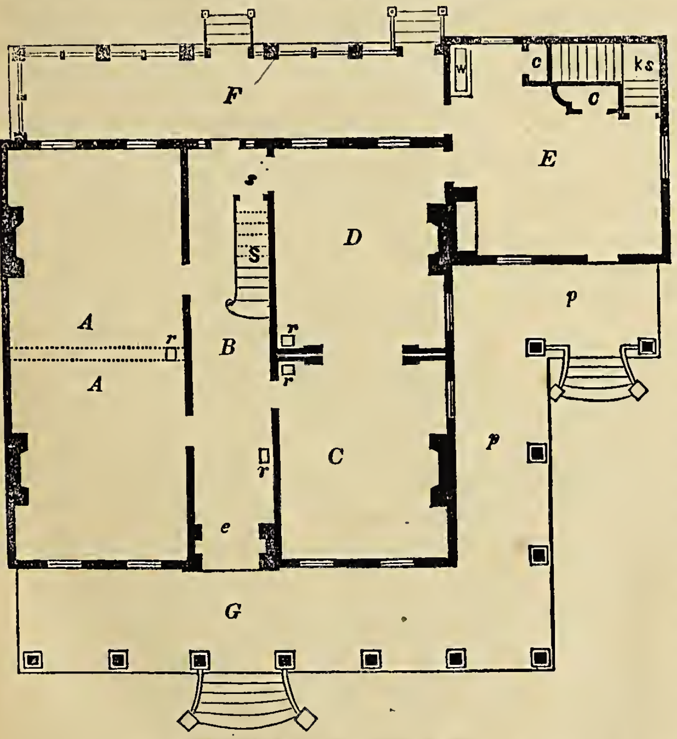
We might add here, that our thanks are also due to the *readers* of the *Agriculturist*, for, after long devoting our entire time, energy, and substance, to the firm establishment, and the elevation of the character of this journal, the generous patronage and the kind efforts to extend its circulation by its older friends and supporters, have at length placed it in such an independent position that we have felt warranted in securing a pleasant home, to which we can look forward as a permanent abiding place for ourselves and our children. By so much, therefore, our subscribers have a personal interest in this dwelling. We are happy to say that we have ample grounds for experimental cultivation, and for raising choice seeds, etc., which will be annually shared by our readers through our seed distribution.

When we recall the rude but cherished log dwelling in the western woods where we were born, and the subsequently cleared up farm on which we received our primary agricultural education, and then look around upon the beautiful trees, and plants, and flowers, that in their season cluster about our present home, we can but be thankful that "the lines have fallen to us in pleasant places;" and we shall labor harder than ever to help develop these blessings—these desirable home adornments—around the rural dwellings of all our readers.

The Location, in the town of Flushing, Queens Co., L. I., is beyond the business and thickly settled portions of the village, but near enough to be convenient to schools, churches, etc. Flushing has attractions for the lovers of horticulture, not excelled by any other town in our country. Almost every dwelling, even to the humblest cottage, is more or less surrounded with flowers and shrubbery. This place has long been noted for its Nurseries—which are among the oldest in the country. We thought to refer to these particularly, but can do so only briefly. First, we may name the establishment of Parsons & Co. Scattered over some 400 acres in different parts of the town, they have about 125 acres of fruit and ornamental trees. If we mistake not, more attention is here given to the propagation of *rare* plants, and those difficult of cultivation, and especially of evergreens, than at any other establishment in the country. There are several propagating houses, and more than an acre of cold frames, for starting and protecting seeds and slips or cuttings of various trees. Ten large green-houses are devoted to cultivating a numberless variety of plants, including especially the rare orchids, camellias, ericas, azaleas, etc. The visitor will be amply repaid for a trip here to see the thousands of plants gathered from all parts of the world.

Second in importance may be named the Bloodgood Nurseries of King & Ripley, some 75 acres, mainly devoted to hardy ornamental and fruit trees. Both of the above establishments are every way reliable. Third, we may name the Linnæan Nursery, which in *former* times, under the care of the two elder Princes, both now deceased, was the most noted, and only extensive nursery then in the country. Fourth, we may note the grounds of Daniel Higgins, who has some 40 or 50 acres devoted to various nursery purposes, but principally to ornamental trees. Then there is the Nursery of Geo. D. Kimber, devoted also in part to ornamental trees. There are, besides, several persons who cultivate garden plants for sale. Altogether, we doubt if a more interesting variety of trees and plants can be found in the same space on this side of the Atlantic, though Rochester excels Flushing in the extent of land devoted to nursery purposes. So much for the locality. We now devote a few lines to a description of

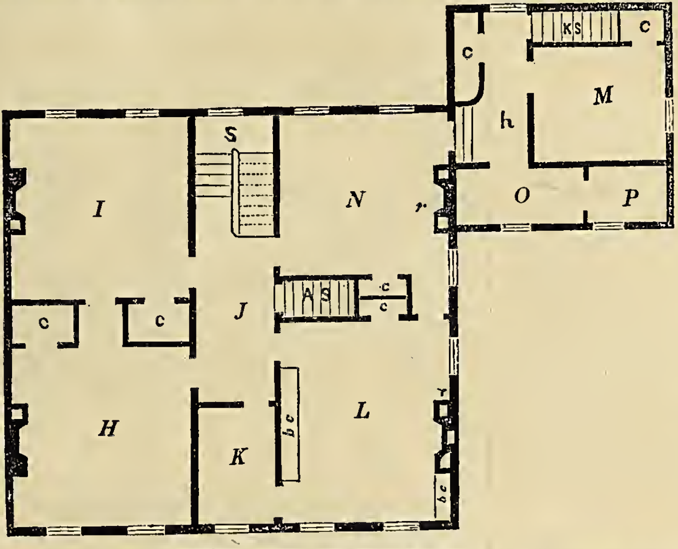
THE DWELLING.—The *elevation* and outward appearance are so well shown in the engraving, opposite, that little description is necessary. The view is taken from the southwest. The building fronts on a spacious street 96 feet wide. The kitchen is in the wing attached to the southeastern side, and though standing back from the main part, commands a view of both the front and side streets, and is almost as pleasant in location as any other room in the house. The gate on the side street furnishes ready access to both the front and rear of the kitchen, and to the rear of the house. A wide Piazza passes along the front and around the south side, and in front of the wing. The Observatory overlooks the village and surrounding country, and from it may be seen a part of Long Island Sound, the southern portion of Westchester County, and the Palisades on the Hudson River. The roof is tinned and painted, and the building furnished with outside close shutters and inside blinds. A hexagonal lattice-work summer-house, surmounted with compass points and weather vane, is seen in the left. Flagged walks extend from the streets to and around the house. These are lined with flower borders and shrubbery. The grounds in front are supplied with a variety of deciduous and evergreen trees and shrubs, which partly seclude the house from the street,—a portion of these are purposely omitted in the sketch, in order to show the architectural structure of the dwelling. The out-buildings are located in the rear, back of which are the grounds in cultivation. The structure is of wood, the walls being filled in with brick. The cellar under the main building is partly above ground.



GROUND PLAN OR FIRST FLOOR.

A, *A*, Drawing Room or Main Parlor, with hanging arch in middle, 33x15—*B*, Main Hall, 30½x6½—*C*, Parlor or Sitting Room, 16½x13½—*D*, Dining Room, 16½x13½—*E*, Kitchen, 17x17—*F*, Conservatory, or Play Room, 35x7½—S, Main Stairs—*G*, Piazza, 42x8½—*p*, *p*, Piazza, 7½ f. wide—*e*, Front Entrance, set back 2½ feet—*r*, *r*, *r*, *r*, Hot air Registers—*s*, cellar stairs—*k s*, Kitchen Stairs—*c*, *c*, Closets or pantries—*w*, Sink over cistern, with double force-pump to carry water to the bath-room above.

THE GROUND PLAN.—The reference figures explain the internal arrangement pretty fully. The rooms on this floor are 11 feet high in the clear. They are warmed by one of Sanford's Portable Heaters, in the cellar. Hot air pipes also lead up through the chimney flues to the nursery and library, and to one room in the third story or Attic. Any one, or all of the rooms may be warmed, as desired. Notwithstanding the objections, urged by some, to hot air furnaces, we believe this to be the safest, neatest, most convenient, and most *comfortable* mode of heating rooms. The kind of heater used, being unsurrounded with brick work, gives out rather too much heat in the cellar, but this is compensated by the fact that the floors of the first story are kept moderately warm, and young children, who are always on the floor, are less liable to take cold. Ours have the present winter, for the first time, been free from colds, though they have run out in all weathers.—The Drawing Room, or larger Parlor, *A. A.* is not divided by folding doors, but has an arch over the center, as indicated by the dotted lines. The smaller Parlor or Sitting room, *C.* is shut off from the Dining Room *D.* by folding doors. The defects in the arrangement of this floor, which we should have avoided, had we planned the house, and which we shall remedy, are: first, there are not closets or pantries enough; and second, there should be stairs descending directly from the kitchen to the cellar. The present access to the cellar is under the main hall stairs, *S.* and by an outside passage between the two sets of steps in the rear of the house.



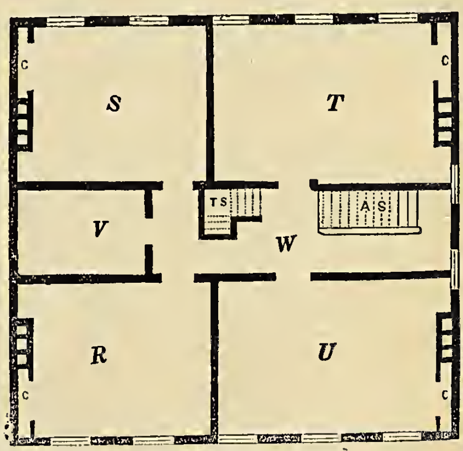
SECOND STORY OR CHAMBER PLAN.

H, Parlor Chamber or Bed-room, 15x14½—*I*, Bed-room, 15x15—*J*, Chamber Hall—*K*, Hall Bed-room, 11x6½—*L*, Library and Study, 16½x13½—*N*, Nursery or Family Bed-room, 14x13½—*M*, Bed-room, 10½x9—*O*, Bath-room, 10½x5—*P*, Water Closet, 6½x5—*S*, Main Stairs—*A S*, Attic Stairs—*K S*, Stairs to Kitchen—*c*, *c*, *c*, *c*, *c*, *c*, Closets or pantries—*bc*, *bc*, Book cases—*r*, *r*, Hot air Registers—*h*, Hall in Wing, 12x6½.

The Conservatory, *F.* is shut in by glass above the wainscoting, and was designed for plants in part, but we prefer to keep it more as a play room for the children, where they may romp and exercise in cold air and in sunlight, when kept in by rain or snow. Our "olive plants" require the first care—other plants must bide their time until green-houses are built.

THE SECOND FLOOR PLAN.—The hight between joints is 9½ feet, in this story. There is a partial deficiency of large *closets* here also. The warm air from the register in the lower main hall, rises through the stairway, and by opening the doors leading in to the rooms *I*, *H*, *K*, the chill is taken off, and the rooms made comfortable in the coldest weather. Both the Nursery and the Library are warmed by hot air coming up through pipes in the chimney flues, put in after the construction of the house. The one in the nursery, *N.* is very convenient, as the room can be readily warmed in the evening, the register be then closed, and opened again when young children are to be washed and dressed in the morning. So also, we can quickly warm up the Library or Study, when we wish to run in at any time of the day or evening to write a few moments—for in this room much of *our* writing for the *Agriculturist* is done.

THE ATTIC OR THIRD FLOOR.—The rooms here are 6½ feet high at the eaves, and 7½ feet high in the middle. There are, therefore, four good rooms, besides the dark Store-room *V*. These are convenient for hired help, when boarded in the family. We often wonder at the economy, which, to save a foot or two of wall in hight, leads those building houses, to make the attic rooms so low as to be nearly useless. A very few dollars will suffice to carry up the walls high enough to give an abundance of sleeping apartments, or store rooms, as may be desired.



THIRD STORY OR ATTIC.

R, Bed-room, 15½x12½—*S*. Bed-room, 15½x12½—*T*, Bed-room, 19½x12½, 13—*U*, Bed-room, 19½x12½—*V*, Dark Store-room, 10½x7—*W*, Attic Hall, 25x7—*A S*, Attic Stairs—*T S*, Stairs to Observatory—*c*, *c*, *c*, *c*, closets—*r*, Hot air Register—4 chimneys with flues shown.

We have thus given the general plan and arrangement of the house as it is. It is pretty convenient, though somewhat different from what we should have made it, if we had planned it originally. More pantries and closets should be provided on every floor; a stairway should lead directly from the kitchen to the main cellar; and another pair of stairs should have been provided, leading from the wing directly up to the attic or third story, without requiring the use of the main hall.

The outside architecture is to our liking. There are few angles or joinings, to spring leaks. The ornamental work is tasteful but not finical, tawdry, or expensive.

Asparagus—Cultivation.

This vegetable is supposed by some to be a native of England, it having been found there, growing wild on the shores of certain rivers. Others assert that its native habitat is Southern Russia and Poland, where it grows so abundantly as to be used for the food of oxen and horses. It has, however, been long acclimated in England and on this continent. Though not greatly nutritious, it makes a pleasant relish with other food, and coming into use quite early in the Spring, it is universally popular. Besides, the doctors say that it has some slight medicinal properties: "it is an active diuretic, and is of considerable value in obstructions of the urinary organs. It is also anti-scorbutic." An extract has been made from it, called *Asparagene*, which is used in several diseases. For these several reasons, if for no others, this vegetable has been used by mankind, almost from time immemorial.

The most common method of cultivation is this: To prepare the ground for receiving the roots, take out the soil eighteen inches or two feet deep over the whole space of your proposed bed, put in at the bottom several inches thick of broken bricks, old bones, horn piths, leather, old mortar, and what not; then fill up the trench with light, warm soil, heavily manured, and plant the roots of the asparagus on the top, covering them with a few inches of earth. Most excellent asparagus has been grown in this way, and many still insist that it is the only way. Hear Mr. Buist, no mean authority in such matters: "The best ground for asparagus is a light, sandy loam, at least two feet deep. Before planting, it should be dug very deep or trenched, burying in plenty of manure. The ground can scarcely be too rich, for the sweetness and tenderness of the shoots depend on the rapidity of the growth, which is greatly promoted by the richness of the soil." Of course, asparagus will live amid the sands of the sea-shore, and on the *steppes* of Asia, but to ensure a rapid and succulent growth, desirable to fit it for a table dish, a warm, rich and deep soil seems essential. In gardens where the soil is naturally deep and rich, less trenching and manuring will be needful. Of one thing we are convinced by experience, viz.: that the soil must be suitably dry. If naturally wet and cold, it must be drained, and if it can not be drained let the bed be built up a foot or eighteen inches above the ordinary surface of the garden.

To propagate from seeds prepare a temporary, bed in any common soil, the same as for beets or onions. The numerous varieties may all be resolved into two, the *green-top* and the *purple-top*, the last being the best. (The *Giant* sort, sometimes highly extolled, is gigantic only when well manured). Sow the seeds early in Spring, thinly in drills, about an inch and a half deep, and in rows eighteen inches apart. Keep the beds free from weeds during the Summer, water the plants in very dry weather, and in the Fall cover them with leaves or strawy litter, two or three inches deep. Next Spring the plants will be in a good state for setting out in permanent beds. For an ordinary family, a bed eighteen feet long and five wide, will furnish an abundance. As a general thing much time will be saved by buying one or two year old roots from nurserymen or commercial gardeners, who usually keep a stock on hand.

The permanent bed having been prepared reasonably deep, rich, and with a dry bottom, stretch a line across it lengthwise, and with a spade cut a small furrow six inches deep. Now, take up the roots from the seed-bed with care not to break them, and set them out again in the furrows as soon as possible, so as not to suffer them to become at all dry. Do not crowd the roots into a hole, but spread them out carefully and mingle the soil among them. The plants should be nine inches apart in the rows, and the crowns about two inches below the surface of the bed. The first row being planted, stretch the line again, a foot away from the first, and proceed as before. After all the roots are planted, level off the bed, raking stones and all rubbish into the walks, and finish off the edges in a neat and workmanlike manner. For the first two Summers, the beds should be kept clean, and every Fall be covered with a light coat of manure. It is the practice of some to raise lettuce and radishes between the rows for two or three years; but, as Mr. Loudon says, "it is a questionable practice, and should by no means be continued after the plants have come into bearing." The third year from seed, the young sprouts may be cut for the table. A bed well made and afterwards cared for, will last many years.

The annual routine of culture for an established bed is this: Keep always clear of weeds. By middle of October, cut down the ripe stalks and carry to compost heap. Cover bed with three inches of manure or leaves. In Spring, rake off the coarsest part of the manure, and fork the rest into the soil, taking care not to injure the crowns of the plants. It will do no harm, even if it does little good, to sprinkle the beds every Spring with salt. There are different opinions about this practice. Keep the beds always smooth and neat. The sprouts may be used for about two months.

Have you Rhubarb or Pie Plant?

There is a great lack in the Spring, of good vegetables and fruits for the table. Beets, turnips, potatoes, cabbages, and apples, if not entirely used up, get old and wilted, and lose nearly all their freshness. The stomach longs, (*hankers* is just the word here,) for something new and green. What can be got? Something. Perhaps a few parsneps or vegetable oysters were left in the garden over the Winter. If so, make a trial of them. They are a fine appetizer. To most palates, they are sweeter and tenderer than those wintered in sand in the cellar.

But if these do not suffice, try the Rhubarb or Pie Plant. This is not as old-fashioned a vegetable as the asparagus. Twenty years ago, hardly a dollar's worth could be found in our markets; now, many thousand dollars worth are annually sold. It is good for pies, tarts, jellies, and is preserved in air-tight jars for use in Winter.

Culture—The simplest but not the quickest method is to raise it from seed, which can be bought at any seed-store. Early in Spring, prepare a patch of light, rich soil, sow in drills an inch deep, and a foot apart. The plants will be up in about a month. During the Summer, keep down the weeds, stir the soil often, and water if necessary. A few radishes sown between the rows, will be out of the way before the rhubarb has made much growth. The plants should be thinned out until they stand about one foot apart. In the Fall, prepare permanent beds for them. Choose moderately moist land, yet not stiff and cold. Give a deep overturning, working in at the same time a lot of old manure. Set the plants three or four feet asunder, to allow for extension of leaves and roots. The crowns should be set three inches below the surface, then cover with several inches of old leaves or strawy manure, for the Winter

This plant is a native of Tartary, and is as hardy as a burdock, and will bear hard usage, yet none responds better to good treatment. To get the best returns from it, keep the soil light and clean around the plants through the Summer, and cover them with several inches of leaves, or muck, or manure, for the Winter. This will give them a strong and early start in the Spring. Some gardeners scatter gypsum on the leaves when they are wet with dew, to give them a new impulse. The manure is to be worked in around the plants every Spring. For several years, the writer managed his plants thus, and though they were only the commonest sorts picked up at a neighboring nursery, our visitors uniformly lifted up their hands in astonishment at our mammoth-leaved plants, exclaiming: What new variety is this! In answer, we pointed to the manure-heap.

For those who do not wish to raise rhubarb from seed, it can be propagated by divisions of the roots obtained from dealers, making a plant from every eye. Wherever the improved varieties, such as the Linnæus, can be purchased, it is better to do so, than to attempt to raise plants from seed, for you not only save time but are more certain of having a good kind.

Artificial Culture—Take up a few roots in the Fall, and pack them away in boxes of dirt in the cellar. After a nap of six weeks or two months, set them in a warm closet near the kitchen stove, giving them a little water. They will grow rapidly. Persons having green-houses can set them under the staging, and they will grow without much coaxing.

Another way is to set several plants in the Fall near together by the stable-door. Before Winter sets in, put barrels over the crowns, and throw a little manure around them to keep out the frost. In the latter part of February, throw fresh horse-dung daily around the barrels, and leave on only a part of the upper head of the barrel. Cold as the weather is outside, the plants will feel the artificial Summer at their roots, and will shoot forth vigorously. Fresh manure must be frequently added as the leaves extend. By the middle or latter part of March, the barrel will be nearly full of leaves.

For those who do not want a fresh pie quite so early, the following method will answer. As soon as the snow is fairly melted, put boxes or barrels, without heads, around a few of your plants, and surround them with fresh manure, putting some inside also. This will give these plants a start of several weeks before those in the open air.

The leading varieties now grown are these: *Tobolsk*—early, red-stalked, of good flavor. *Giant* a very large sort, with round, green stalks, often four feet long, nearly as large as a man's wrist. This is quite popular in England. *Myatt's Victoria*, large, red, rich, and earlier than the *Giant.*

Downing's Colossal, better than the last, crispy, tender, rich and large.

Myatt's Linnæus, eclipses all; very large, and what is very important, is the *least acid* of all. And here, let us testify to Mr. Charles Downing's magnanimity in having recently published a card certifying to the great excellence of Myatt's Linnæus, and its superiority to his own popular *Colossal.* Surely, we may safely say, all the good and honorable men are not dead yet.

Transplanting Forest Trees—Trees for Prairies.

To the Editor of the American Agriculturist:

I am about laying out grounds for a home upon the prairie and I wish to ask a few questions upon the selection of trees to set around the buildings, how far apart to plant them, and how they shall be set.

We have abundance of hard and soft maples, elm, linden, cotton-wood, poplar, burr-oak, black walnut and butternut. Now which of these shall I select to plant about my house. J. F. Stock.

Blue Earth Co., Min. Ter.

Remarks.—It would be an easier matter to recommend a selection if we knew the extent of land laid off for ornamental purposes, size and position of buildings, etc. If there is sufficient room, it might be well to plant a few of each kind named, with perhaps the exception of the poplar which is not generally admired. The hard maple makes a fine tree, and if the grounds be large, a small sugar grove might be planted for both ornament and profit. So too we would plant freely of the black walnut, a stately wide spreading, and quick growing tree, valuable for its fruit. A few evergreens of some sort should by all means be planted to afford a contrast in Winter and serve as a screen or hedge against severe blasts. Set evergreens and low growing trees or shrubs near the house, with the tall growing deciduous sorts at a distance. We have often seen one dense mass of trees so encircling the house that scarcely a single ray of sunlight could reach it to dry up the moisture after a rain. A little sunshine is desirable.

Persons often set their trees quite thickly at first, and as they crowd upon each other, remove the least valuable. The objection to this is that the really desirable trees are crowded and grow slowly, also that few persons have the courage to cut out the surplus when once growing finely.

Set the trees as early as practicable in Spring. Select trees from the outskirts of the forest, take them up with as many roots as possible, head back the leading shoots to induce side branches, and plant in a wide, moderately deep hole, and there will be little danger of failure, unless the season prove very dry, in which case a mulch or coating of straw, leaves, or tan bark will be serviceable.

Two Kinds of American Mountain Ash.

It does not seem to be generally known that there are two sorts of Mountain Ash indigenous, to this State. One kind, which is the true *Sorbus Americana*, has its flowers in an upright corymb, but the weight of the fruit at length reverses it, and makes it pendant. The berries are of an orange scarlet color. This variety abounds in the neighborhood of Pultneyville, and doubtless in other parts of this State.

The other species, *Sorbus microcarpa*, has smaller flowers and fruit, and the corymb remains erect. The fruit is scarlet. It grows in considerable numbers among the rocks at Little Falls, on the Mohawk river. Both sorts are worth planting.

Grafting Knives.

A. T. Northup of Otsego Co., N. Y., sends the drawing of a grafting knife, of which fig. 1 is an engraving, and asks if there is a better form. This form will answer tolerably well. It is made wholly of iron, except that the knife or chisel portion seen at *k* is sometimes of steel, which is preferable. The cutting edge is hollowed so as to cut upon the outer portions of the branch before splitting the center. The wedge, *w*, is used to hold the split open while inserting the cions, and the hook, *h*, is convenient for hanging the implement upon a limb of the tree. The objections are that, to have a sufficiently strong tool, with a thick back to the knife portion, the blade is too obtuse, *splitting* the limb in advance of *cutting*; and there is no guard to regulate the depth of split. We prefer the knife shown at fig.2., in which a thin steel blade is riveted to an iron back, having a wooden handle at one end, and a wedge at the other. This makes a smooth, clean cut for the cions, the frame back preventing it from entering too far. If it is desirable to hang it up, a hook can be screwed into or otherwise attached to the end of the handle. In fig. 2, the wedge portion is rather close to the knife or chisel.

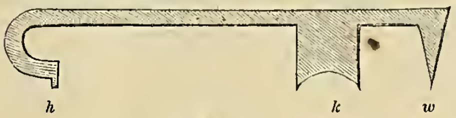


Fig. 1.

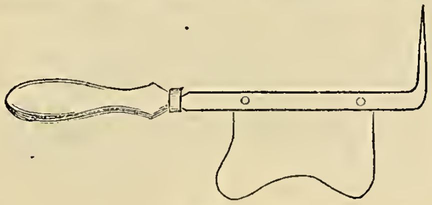


Fig. 2.

In fig. 3 is still another form, much used in some parts of the country. The iron or steel blade is curved upon its edge, and terminates with a wedge It is quite convenient, and can be hung up by the wedge portion, which is a little bent. As in fig. 1, the back has to be so thick to give sufficient strength, as to make a rather blunt edge, with no guard to prevent splitting too far.

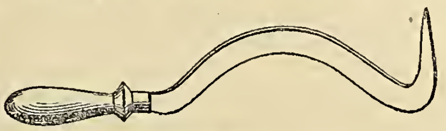


Fig. 3.

Ringing the Grape.

To the Editor of the American Agricuturist:

I have been a cultivator of grapes for twenty seven years, and during the past three years I have practiced ringing some of my vines. The result is, that it produces very large, watery, acid fruit. I have raised bunches that were estimated to weigh one pound each, but they were not fit to eat. It is said that they ripen earlier for this process, but I think it is a mistake. They only *color* a few days sooner, and never ripen at all. I have never found one bunch fit to eat, although one year I took the premium at our county fair for these sour, overgrown grapes, and that too when there were good, sweet, ripe, delicious clusters lying by the side of mine. I have never been troubled with mildew or blight, and have never failed to grow a good crop of grapes.

Monroe Co., N. Y. E. Ferguson.

Remarks.—These experiments of ringing the vine coincide very nearly with our own trials, as detailed on page 367, of last volume (Dec. No.). A writer in a late number of the (English) Gardeners' Chronicle, practiced it upon his Black Hamburghs, which made them show earlier signs of ripening, and they were of increased size, but failed to color, which he considered a fatal objection to the experiment.—Ed.]

Raising Grapes from Seed.

This is easily done. The seeds designed for sowing should not be allowed to become dry and hard (as they will if put away like other seeds in papers or boxes); if they become very dry, they will seldom vegetate. The proper way is to save them at the time of eating the fruit, and mix them at once in sand or other earth, to keep them moderately moist until the following Spring, when they should be sowed in drills like apple or other fruit seeds. As to the choice of seeds for sowing, there are different opinions. The celebrated pomologist, Van Mons, held that seeds from new varieties of fruit were much more likely to produce improved sorts than seeds from old varieties. For instance, seeds of the Delaware or Rebecca grape (being, as it is supposed of comparatively recent origin) would be more likely to produce superior seedlings than those from the Isabella or Catawba, which are considerably older. Others hold that it matters little what seeds are sown; and, as a ground for their opinion, they refer to the many excellent seedling fruits of all sorts springing up by chance in various parts of the country.

Whatever seeds are planted, there is no certainty of getting improved varieties There is a strong tendency in all plants to revert to the original wild type. Of a hundred grape seeds sown, doubtless ninety-nine of the plants will not be worth raising. In order to determine which of the seedlings promise best, Mr. Longworth, the Grape-King of the West, has somewhere given this rule: "Where the stem is hairy, I throw them aside without waiting to see them fruit. The less white on the under side of the leaf, the better the promise." Another fruit-grower of note, goes so far as to say that *all* the plants which come up the first year after sowing are nearly worthless, and may as well be thrown away at first as not. Those which spring up the second year, he saves. The first year plants he considers to have an excess of wood-making force, and to be wild and coarse in every respect. The second year plants being slow to start, have less of mere vegetable force, and have a nicer organization, which will show itself in finer fruit.

Yet after all, this is a very uncertain way of propagating new sorts. To make surer and quicker work of it, we should resort to hybridization—i.e., to the cross-breeding of different sorts. A half-dozen carefully hybridized seeds will be more likely to furnish a superior new grape than many hundreds of chance gathered seeds. As the young seedlings are more likely to partake of the constitution of the female parent than of the male, it is best to take a good, hardy, native grape and cross it with a fine foreign variety. For example: to get a new black grape, we might impregnate the pistils of the Concord or Logan, with pollen from the Black Hamburgh. To get a new red grape, we might fertilize the pistils of the Diana or Delaware, with the pollen of the Rose Chasselas. To get a new white grape, we might cross the Rebecca or Golden Clinton with the Golden Chasselas. Plants raised from seeds so hybridized, will be likely to inherit the hardiness and early ripening qualities of the native plant, together with more or less of the fine flavor of the exotic.

There is, however, one practical difficulty to be provided against. The foreign varieties being almost necessarily grown under glass, will naturally blossom earlier than the natives in the open air: therefore, the natives to be experimented on should be brought into the grapery in pots, that both may blossom at the same time, and the work of hybridization be more conveniently performed. We are told, however, that if sufficient care be taken, the pollen of the exotic may be gathered in a glass phial, and kept until the natives in the open air come into flower.

Whichever course is taken, let the hybridizer proceed as follows: Cut off three quarters of the buds on every bunch to be treated, leaving only the strongest buds. Watch them as they come into flower, and just before they are fully expanded, clip off the anthers with a pair of scissors before they have burst and so scattered their pollen on the stigmas: if they do this, your work is lost. Having removed the anthers, go to the exotic vines, and with a camel's hair brush, take pollen from the flowers, and rub it on the stigmas of the native sorts. Do this to as many bunches as you have time and patience to experiment with, and repeat the process several days in succession, until it is quite certain that the work has been effectually done. If the impregnation has been effected, the embryo at the base of each pistil will soon begin to enlarge; if it has not the embryo or berry will remain unchanged. When seeds so raised have ripened, gather and keep as above.

Raising Grapes in Pots.

Just now there is no little interest in this subject, and we are glad to see and encourage it. There is no prettier sight than a vigorous little vine growing in a diminutive pot of earth, but loaded down with delicious clusters of grapes. Flowers in pots are always beautiful, but grape-vines in pots or tubs have both beauty and utility—they strikingly illustrate the force of the Latin phrase "*utile cum dulce.*" And what is still more interesting, this species of culture is within the reach of every class of persons, the dwellers in cities and villages as well as country residents, as we shall speak of before we get through. Inquiries for information on the subject constantly reach us, to which we cheerfully respond.

Grape-vines are raised in pots with two distinct objects in view; *first* for propagating vines for planting afterwards in the open ground or vinery; and *second* for growing exotic vines wholly in pots under glass, simply for the fruit.

1. Of the newer native sorts, probably many millions of young plants will be propagated in pots the coming Spring, and yet the indications are that they will hardly suffice for the demand. The pieces are prepared as follows: In the latter part of this month or early in March, prepare the cuttings. Choose plump and ripe wood, cut it into small pieces having a single bud to each, with about an inch of wood above and below. This amount of stem is considered necessary to furnish food for the young plant before it is able to draw it from the ground. Fig. 2 may represent a bud prepared for striking. Now prepare a simple hot-bed, made of two or three feet of partially decayed manure, well turned over and sweetened with ashes or lime. Cover this with six or eight inches of good sandy soil. If neither pots nor boxes can be had, the eyes may be set out in the prepared earth; but experience shows that it is better to use pots or shallow boxes with holes in the bottom, planting the buds in these and then plunging them in the hot-bed. The pots (three-inch pots) should have a few pieces of broken crocks or charcoal, or oyster-shells at the bottom; over these lay a little moss. then fill half full with good vegetable mold; afterwards fill half the remaining space with sand. Now, lay in the bud, and fill up the pot with sand, pressing it down firmly. Some maintain that the buds "strike" better if split, as shown in fig. 3 Let the pots be plunged in the hot-bed up to their rims. Maintain a heat of about 70° to 75° by day, and 55° to 60° by night. The pots of course are to be kept under glass during the cold weather. Keep the air under the glass close and moist.

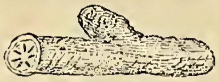


Fig. 2.

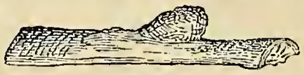


Fig. 3.

In the course of a month or six weeks, they will have made shoots an inch or two long, when they should be shifted into larger pots. As soon as the shoots get six or eight inches long, they should be transferred to still larger pots: those of a quart size being large enough for ordinary purposes. If it is desired to raise exotics (foreign vines) for pot-culture, and to fruit the next year, they should be shifted again into gallon-pots, and their growth encouraged as much as possible. For the native sorts, forcing their growth throughout the Summer is not to be recommended. By the method above stated, they will make good healthy plants by Autumn.

2. A few words as to the uses and methods of growing grapes in pots for fruiting. In this practice, there are advantages and disadvantages. Of the latter, we may mention the extra care and time needful in transplanting and watering, the expense and trouble of raising a succession of young vines to supply the places of those exhausted, of providing pots and tubs, tank for manure water, etc., etc. Of the advantages, much may be said. It is suited to the circumstances and wants of amateurs and small gardeners, etc. Any one having a small green-house can grow grapes in pots. He can either buy his young plants, or can start them himself in a little forcing-house, and then bring them on to the shelves of his green-house. There, they will not interfere with his other plants (many of them being taken to and plunged in the open garden in Summer), and the berries will ripen as well as in a regular vinery. The poor man who can not afford the luxury of a green-house or grapery, can at least build him a shed, in size according to his means, and cover it with a few sash. Humble as the building looks, and destitute as it is of wide and costly borders, he may grow pot-grapes therein as well as in the most splendid vinery. The man of business, who has only a little back-yard in a city lot, can put up a glass house, eight or ten feet square, and work out for himself great delight in managing a dozen pots of grapes.

So, if one has a regular cold grapery, and wishes to get an earlier crop than that would furnish him, he can start a few vines in pots in his hothouse during the month of March, and after the fruit is set, he can remove these pots to the vinery or open ground even, and ripen the fruit in June or July. There is an advantage also, in the matter of preserving the fruit after ripening. By removing the pots into a cool, airy room, the fruit may be kept on the vines for three or four months perfectly fresh.

But we need not speak further of the advantages of this practice. How is the thing done? It is very simple. Buy young plants in pots, or propagate them from eyes, as already shown. If they are in quart pots, shift them into gallon pots, or boxes or kegs of the same size. A good soil for potting, may be made of rotted sods chopped fine, leaf mold, old barn-yard manure, a little lime rubbish and some bits of charcoal. Mr. J. F Allen's formula is this: "Sods, three parts; leaf-mold, two parts; rubbish, or leached ashes, and charcoal one part." This makes a rich, porous soil in which the grape delights to ramble. Give a good watering at each shifting. Tie the canes to stakes as they grow. When they are seven or eight feet high, pinch off the ends, and continue the pinching as the buds push. By the last of July, transfer them to their final boxes for fruiting, which should be of three or four gallons size. Use the soil described above. For the remainder of the season, treat them in all respects like vines planted in the borders of a vinery, and by Autumn they will have made good wood for next year's fruiting. In the Fall, prune back to two or three buds; if very weak, cut down to one bud, and give a fresh supply of compost. Some advise to shorten in the longest roots in the Fall. Protect them from frost during the Winter, and give the roots just enough water to prevent their drying up.

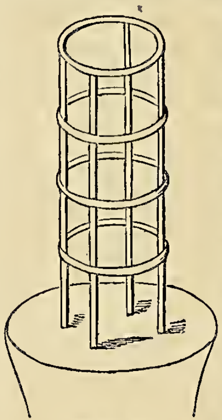


Fig. 4.

In training the vines next year, a very neat way is to use wire supports in the form of a circular trellis, like fig. 4. If the roots are allowed to strike through the holes at the bottom of the pot into the soil beneath, the canes will become strong enough to bear fruit the succeeding year; though it is the doctrine of some that pot vines should rest every other year. In the Fall, cut off the roots which have struck into the soil below, clean the pots and wash the canes with the mixture commonly used in graperies. Now lay down the canes for their winter nap. We should add that, during the growing season, the vines should have frequent waterings of liquid manure. Drainage from the dung heap well diluted may be used, or guano dissolved at the rate of one ounce to a gallon of water. In all other respects but those now mentioned, the treatment of grapes in pots is similar to that employed in ordinary culture.

Mr. Chorlton recommends the following as the best five varieties for pot-culture: Black Hamburgh, Chasselas Fontainebleau, Grisly Frontignan, White Frontignan, and also Black Prince.

Winter attention to the Orchard.

The good price realized for apples, the present season, should lead the farmer to give his orchard a fair chance to keep up its bearing. If upon new land, or rich meadow, it may bear well for a succession of years. But eventually it will want manuring, upon almost any soil. It should have attention every year, even if it is not manured.

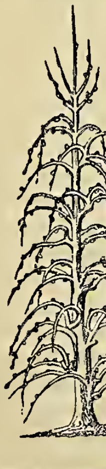
Pruning should not be delayed beyond the middle of this month, unless deferred until mid-summer, which is a preferable season. Remove all dead limbs, and the small limbs that cross each other. An inverted umbrella is a good shape for the head of small trees. Remove the loose bark by scraping, and the scale bugs and other insects by washing with soft-soap and water, mixed half and half. Examine all the small limbs for cocoons of insects. A young orchard thrives much better to be cultivated and cropped with roots for the first five years. Manure liberally, and make a deep rich soil for the roots to penetrate in after years. Apple trees in grass ground do better for mulching. We have seen stone heaps made around them with decided advantage. But decomposed muck is better, and good compost from the barn cellar, a load to a tree, is better still—now is a good time to apply it.

For the American Agriculturist.

Training and Pruning Trees to induce Fruitfulness.

Every tree planter has noticed a vast difference in the tendency of fruit trees to an early, or late, or non-bearing state. Both apple and pear trees are frequently seen standing only three to four feet high in the nursery, loaded down with fruit, although no attempts had been made to dwarf them; while others, after having been planted out for years, continue to make a strong annual growth but disappoint their owner in fruit. As a general thing those trees thrown into early bearing were checked in their growth, either in root or top. The accidental laceration of the roots or branches, or girdling or barking the trunk will frequently produce this result. The fruit grower acts upon these hints and forces his too rapidly growing trees to form fruit buds. If he removes a narrow ring of bark, either from the trunk or branches, the tree receives a permanent injury although it may fruit abundantly for a year or two.

There are two methods of bringing these rapid growing trees into bearing with a permanent benefit rather than injury to the trees themselves. One is to cut back the leading shoots; and the other is to bend over the branches and confine them with strings as shown in the accompanying engraving. The object in either case is to check the flow of sap, and force into fruit buds what would otherwise form leaf and shoot buds.



This form of training is called "*quenouille*," or "conical," and is mainly practiced upon the pear, by heading back the young tree to induce side shoots, which in turn are cut back moderately, leaving them uniform upon the different sides. The outer branches are now tied down to stakes driven in the ground, thus compressing the tubes or cells, which checks the flow of sap and induces fruit buds, instead of flowing to the extremities and pushing out new wood.

A free cutting back of the previous season's growth, especially the upright or leading shoots, also tends to develop fruit buds and at the same time forms a neat compact head to the tree.

This heading back and tying down can appropriately be done during the mild Winter days, and if the tree has sufficient age, it will form buds the next Summer, and they in turn will develop into flowers and fruit the following season. *

PEREGRINE WHITE'S APPLE TREE.

A Jog in the Fruit Garden.

A Farmer.—So you call this a fruit-garden, hey? Why don't you call it an orchard or a garden-patch, one or t'other?

One of the Editors.—Oh, because it is a mixed garden, containing both vegetables and the smaller fruits. Look around here, see these beets, melons, dwarf-pears, dwarf-cherries, currants, grapes, and what not.

Farmer.—Well, let that go. Now please tell me about these dwarf pears—who first thought of grafting a pear-tree on a quince-bush: I'd like to know.

Editor.—Can't tell you, sir, nor who first practiced grafting at all. There are many stories about it in Pliny and other ancient writers, which are neither true nor ingenious. If the discovery had occurred in our day, it would have made the man immortal as a great benefactor of his race.

Farmer.—There used to be pretty good apples in this country, and a plenty of them too, especially in New-England, before grafting was practiced here. Farmers used to plow their land and sow apple-pomace and raise orchards from the seedlings.

Editor.—Yes, and good cider was made here, from the very first. I have in my pocket a little book containing some of the laws of Plymouth Colony, passed in the year 1667, which show that apple-juice was then a common beverage. Let me read a few lines:

> "It was enacted by the Court, that no person or persons shall sell any cyder to any Indian, under the penalty of ten shillings, etc. And that none allow any persons to spend theire time by tippleing any cyder, liquors, &c., in their houses; and that in case any cyder be found in the custody of any Indians, it shall be lawfull for any man to take it away from them."

Farmer.—Yes, yes, and it would have been well if our forefathers had not given them the taste of fire-water at all. But, don't you know that our ancestors raised pears, as well as apples? Of course, you have read of the famous Endicott pear-tree, at Danvers, Mass , which bore fruit upwards of two hundred years; and of the Stuyvesant pear-tree at the corner of 3d-avenue and 13th-street, in New-York, only about thirty years younger than the other, and which still blossoms and bears fruit.

Editor.—Yes, I have heard of them, and seen the Stuyvesant tree. [Here, by the way, is a picture of an apple-tree planted at Plymouth by Peregrine White, the first child born after the landing of the Pilgrims. I don't know whether it is standing now or not. It was upward of two hundred years old when this drawing was made.] I have noticed the grand old pear-trees still alive, which the French planted along the line of the Lakes and down the Ohio River, as early as the beginning of the eighteenth century. Yes, we had fruits in America, before we had fruit-books or agricultural papers. Occasionally, in those early times, the newspapers inserted paragraphs on farming and gardening, in which many wise things appeared, such, for instance, as these: "If you inoculate the stock of a tree with mercurial ointment, it will poison all the insects which infest it!" So that Tyler's calomel tree powder was only an old humbug revived. "If a pear-scion be grafted on an apple-stock, the scion will gradually change into an apple branch and bear apples! A cutting of an apple-tree will bear fruit in a very few years, if it is inserted in a potato and then planted!" All of which were in keeping with Virgil's fable of grafting the apple on the oak, and of procuring a new race of bees from the carcass of an ox!

Farmer.—That's what I should call "book-farming," in earnest. But now, tell me why pear-trees don't live as long now-a-days, as they used to? I lose several trees every year, and so do my neighbors, far and near. Has the climate changed, or is the soil worn out, or do we prune and manure them to death? What's the trouble?

Editor.—Terrible hard questions, those. As to our climate, doubtless the cutting off of our forests has rendered it more changeable, more subject to drouth and severe storms, more windy and disagreeable, and more subject to *extremes* of temperature. But after all, the climate gets more abuse than it really deserves. Our summers are hotter than those in England, and our winters colder, but then we beat the British in raising fine fruits. Cobbett, a writer on gardening, well says: "In America, when we see the blossom, we expect the fruit will follow, but in England and France, the trees must often be covered, to protect them from the untimely frosts of April and May." Then, again, we generally ripen the apple, pear, peach and plum, without difficulty in the open air; but in England the peach can hardly be ripened without careful training on walls, and the pear and plum are generally dwarfed and trained against walls and espaliers. So too with the more delicate sorts of apples. Many of our finest peaches can not be raised there at all.

Farmer.—I stand up for Yankee-land, in spite of all its draw-backs. And I stand up for that old stand-by, our apples. I don't wonder that our forefathers cultivated them. The trees are easy to raise, and the fruit is good for man and beast, and not the least for swine, a race not apt to relish, or to thrive on unsubstantial fare. As fruit now sells, my orchard is about the best part of my farm. Mr. Editor, how long do apple-trees live, on an average?

Editor.—I can't speak with certainty. Some say it takes twenty or thirty years to bring a tree to its full maturity, and that then it lives about as much longer, making in all about sixty years. Yet, I have heard of apple-trees over a hundred years old. Still, I am inclined to believe that the average life of a tree is not above fifty years. Probably most of the orchards now living were planted since the Revolution; and probably the kinds of apples which are now our favorites, were not such as regaled the palates of our great-grandfathers.

Farmer.—What do you mean? Did'nt Miles Standish and Governor Bradford and others, great and small, eat Baldwins and Russets and Newtown Pippins? I'd like to know.

Editor.—I can't tell you, sir, from history. But if a certain theory of some learned pomologists is true, no variety of apple lasts longer, on an average, than fifty or sixty years, but runs out. The pear holds out longer.

Farmer.—Please explain that humbug.

Editor.—Humbug it may be; but many sensible men have held to it. Thomas Andrew Knight, of England, is generally considered the author of the doctrine that cultivated varieties of fruit have only a limited period of life. Trees very favorably situated and well managed, might live beyond that period, but the majority would die at the allotted time. He thence drew another doctrine, viz: that all buds or cions taken from one tree and inserted in another, are only extensions of the original tree, and can not outlive it. To all lovers of fine fruit, this is an unpleasant theory, and many writers reject it.

Farmer.—What is your private opinion about it, sir?

Editor.—Perhaps, I havn't fully made up my mind. It certainly has some very stubborn facts on its side. As long as fruit trees sicken and die off, annually, as they now do, people will believe it. And if it *is* true, all we have to do is to keep on sowing seeds of fruit, and so raise new and good varieties to replace those which die out. And we needn't be discouraged after originating such apples as the Rhode Island Greening, Esopus Spitzenberg, Northern Spy, King, Melon, etc., and such pears as the Buffum, Dix, Lawrence, Tyson, and Seckel.

But then, perhaps this theory is *not* correct. If I had time I could say as much against it as for it. But I must go now.

Familiar Talks by the Doctor*...II.

Mr. Editor.—Thanks for your kind introduction of me to your readers. No doubt you are correct in saying that, as a class, farmers are more healthy than many, perhaps most others. Still they do suffer unnecessarily from ill health, and my hope is to enable some of your readers to avoid that suffering.

Overwork—doing too much—going beyond one's strength in bodily labor, is a very prolific cause of ill health among farmers. The reason I suppose to be this, that no class is so greatly tempted to do too much. There are certain limits to the strength of any man, and these limits are very different for different men. It is no disgrace to you that you are not as strong as Samson, and it is no disgrace to me that I am not as strong as many a broad-shouldered six-footer whom I meet. He can load a tun of hay or lift a big hog, better than I—but I can judge of a person's pulse, or perform a surgical operation, better than he.—This is no disgrace to either of us, and I should be as unwise if I attempted to rival him in loading hay, as he would be to try to rival me in removing a tumor.

I dwell on this point because it will be easier for your readers to see by this illustration that there are very great differences in the ability of different people to do the same work, than if I had simply compared two farmers. The feeling is very common too that it is rather a shame for a man not to be able to do as much as his neighbor.—This feeling is perhaps of no consequence in itself, but it leads to results that are, from my point of view, of great importance in their influence upon the health. Thus, if a man who weighs 130 lbs and is of moderate muscular development, has heard his neighbor who weighs 160 lbs, and has large strong muscles, say that he can load a tun of hay in a certain time, he is very apt to attempt to do the same thing in the same time, so that he may not be thought inferior to his neighbor. The result may be that he makes himself an invalid for the rest of his life. Or a farmer may employ a hand to help him during haying, and insist on "keeping out of his way" when they are mowing together. It requires immense exertion, but he does it, his ambition making up whatever deficiency there may be in strength. This gratification is, however, dearly paid for by the years of ill health which may follow a single effort of this kind.

The illustration which I use in talking directly to men of such things is this. If you have two valuable horses, one of which weighs 800 lbs, and the other 1100 lbs, would you risk injuring the lighter one by setting him to draw a load which is full as much as the heavier one can pull? Or, if the one that weighs 800 lbs can travel 10 miles in an hour easily, and the speed of the other is fairly rated at 8 miles an hour, would you attempt to make the large one always go 10 miles in the hour? Well, overwork is just as likely to damage you as your horse, and perhaps more likely to, and if you will not risk your horse—why do you risk yourself?

The contrast is still more striking when you remember that a hot day in June or July is just the day when you are particularly careful not to drive your horse too fast, or with too heavy a load, and yet it is just the day in which you will be most apt to over-exert yourself, especially if you are haying. Many a man takes better care of his horse, because it has a money value, than he does of himself, when a whole family may depend for their comfort on him.

But there is another way of farmers overworking themselves, which is still more common, in many respects more injurious than that which I have described. I mean by always having a little *less* help in carrying on their farm than they *need*. Thus if a farmer needs *four* men to carry on his farm, and he never hires but *three*, the consequence is that he will be constantly doing more than his strength is equal to. His men will not, as a general thing, do more than a fair day's work, (no one does for hire), and they ought not to be blamed for it. But the deficiency must be made up in the main by the farmer himself. It is not a month since I was consulted by a young man who has probably made himself an invalid for the rest of his life in precisely this way.

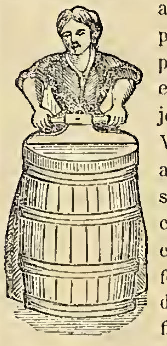
Does any one want to know what the effects of overwork are. Let him try overworking his cattle or his horses for a year, and he will see some of the effects, for they are not always the same. I shall not attempt here to describe them, but every one may rely upon it, that if he continues to do more than he his able, he will have to pay for it. If you have an iron constitution, remember that iron will not bear every thing. If it is broken, it may be patched up, but not made as good as new.

Now it remains for me to add, that if we are poor and unable to obtain all the assistance we need, we must all often overwork ourselves.—Of course, in such a case we are *compelled* to run the risk of whatever results may follow. But this is one of the evils of poverty. There is however no such excuse for a man who overworks himself without such necessity. For the sake of making a few dollars more, he ruins his health, which no money can restore. Doctors know what the value of health is, and let me tell any one of your readers, Mr. Editor, who with the new year is making his plans to save a hundred or two of dollars by working his farm with a less number of hands than he needs, that he had better throw that amount of money into the fire and then get all the assistance necessary to avoid overwork.

But, I have something more to say on this point, and only add now, that if your Horse is *able* to go 10 miles an hour, but is not inclined to go at a faster rate than 5 miles an hour, there is no harm in whipping him. So too, I trust, no lazy man will make an excuse of what I have said, to do *less* than he is *able*. P. H. E.

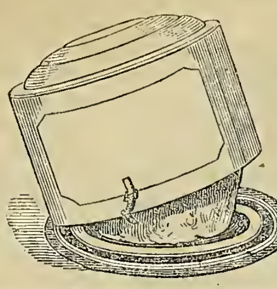
Save the Coal Ashes.

Those who use hard coal, lose a large amount of fuel in the unconsumed portions thrown out in the ashes. The ashes themselves are well worth saving to put upon the garden or field. They are alkaline, and act similarly to lime, or wood ashes, and though much less powerful, they are well worth preserving. Sifting out the ashes is, however, a disagreeable job, and is apt to be neglected. We have now a simple, cheap apparatus which is effective, and saves all the annoyance of dust—called "Adams' Coal Sifter." It consists of a circular iron hoop forming a cylinder, say 5 inches deep and 16 inches in diameter, fitted, with a strong barred sieve at the bottom. This is fastened to a shaft which is hung through a circular board, and is furnished with handles above. The board is laid upon the top of a common barrel, and the iron sieve swings down inside. The cinders are poured in through a trap door which is then closed, and by turning the handles back and forward rapidily, the ashes fall through into the bottom of the barrel. The apparatus is then lifted off, the coal poured out, and the sieve returned for a new charge. The barrel can thus be nearly filled up with fine ashes before emptying it. The apparatus can be carried home in the hand readily, and fitted to the top of any barrel. It is made strong and durable, and costs but a couple of dollars or $2.25. Its convenience, cheapness, and freedom from dust, make it a desirable addition to the household implements.



He who seldom thinks of heaven, is not likely to get there, as the way to hit a mark is to keep the eye fixed upon it.—*Horne.*

The hard stool of repentance has no cushion.



Air-tight Provision Safe.

Among other recent additions to our stock of household conveniences, is an article which we have sketched above. It consists essentially of an iron plate, raised in the middle, and grooved around the edge; and a tin cover. In the groove in the bed-plate is placed a strip of India rubber, upon which the cover fits down. The cake, bread, meat, or other article, is set upon the iron plate, the cover placed over it with its edge upon the rubber, and it is then brought down firmly by means of two little ears or clamps. It will be readily seen that the rubber packing excludes ants and other insects, and also shuts out air. The iron plate is neatly japanned black, and the cover is also japanned on the outside with fancy colors, so that the whole is ornamental. We have as yet obtained only two small sizes; the cover of the larger ones is 9 inches in diameter, and 7 inches high. Retail price 75 cts. Larger sizes, suitable for holding several loaves of bread, will doubtless soon be made. Arrangements are being made for manufacturing these articles for market, of which due announcement will probably be made in our advertising columns—perhaps in the present number.

For the American Agriculturist.

Common Errors in Speaking.

BY ANNA HOPE.

As I came in the cars from Geneva to New-York, there sat behind me two ladies, very expensively dressed. When the cars stopped, a gentleman came to speak to them. Among other questions, he asked if it was "a pretty general time of health in Cincinnati"—a form of inquiry more peculiar than correct—and being assured that it was so, he offered his services to the ladies in any way they should require. One of them immediately opened her satchel and took from it a silver cup, requesting him to bring her water. As she handed it to him she said, "It will need to be wrenched," (she meant *rinsed*). I have not unfrequently heard washer-women use this expression, but I was surprised to hear it from other lips. In my younger days I always associated education and refinement with wealth, and I well recollect my amazement when I first heard ungrammatical expressions from gentlemen and ladies, but I have grown wiser, and I find that correct English is not quite so common as I had formerly supposed.

A few hints on pronunciation and grammar may not be out of place in the *Agriculturist*, and they may call the attention of some of its readers to inaccuracies of their own that have escaped their attention, and which they would gladly correct. Different parts of the country have different peculiarities in minor errors, as well as in more important matters, but there are errors which "know no North or South, or East or West." There are very few persons who are perfectly accurate in their use of language, and even those who know better, often err in consequence of wrong influences in childhood. A New Englander is easily distinguished from a New-Yorker and so is a Southern or a Western man by peculiarities of which they themselves are unconscious. The "nasal twang" has been generally considered peculiar to New England, but so far as my observation extends, it belongs equally to other northern States. I have noticed more of it out of New England than I ever heard in it. The finest, fullest, roundest, most musical voice I ever heard is that of a lady of Irish birth who has been educated in this country. Her words drop like pearls from her lips.

A common fault in pronunciation is not sounding the *g* at the end of such words as *farming*, *sweeping*, *dusting*, pronouncing them as if spelled *farmin*, *sweepin*, *dustin*.

Tuesday, *student*, *duty*, *dew*, *due*, *flute*, *duke*, *new* and a few other words which should have the clear sound of *u* as in unite, are often pronounced as if spelled with *oo*; as *Toosday*, *stoodent*, *dooty*, *doo*, etc. The proper sound of *u* in these words is one of the most beautiful in the language, and it seems a pity to dispense with it, and in its stead make *oo* do double duty. No one thinks of calling upon *u* to relieve *oo*. We never hear of a man's putting on his *bute*, nor of his *huting* at the idea of endeavoring to give the correct sound to each letter.

The unaccented vowel is too often dropped out of words, as *sat'n*, for *satin*, *curt'n* for *curtain*, *sudd'n* for *sudden*. When a child, I heard a member of one of the old New York families talk about *towl's*, and whether to think of it as incorrect, or as something very stylish, I scarcely knew, but I practiced upon the word till I could, in my room say *tow'l* as well as she, although I did not venture upon it elsewhere.

Al and *el* are frequently changed in speaking into *le*; as *meddle* for *medal*, *mortle* for *mortal*.

The *e* and *i* are sometimes changed into *a* or *u* in many words; as *quantaty* instead of *quantity*, *crualty* for *cruelty*, *humanaty* for *humanity*.

February is often pronounced *Febaary*; *preventive*, *preventative*; *government*, *goverment*; *cupola*, *cupalo*; *attacked*, *attackted*; *drowned*, *drownded*; *umbrella*, *umberel* or *umberella*; *violent*, *voilent*; *afraid*, *afeared*; *chimney*, *chimley*; *awkward*, *awkard*; *errand errant*, or *arrant*, *or arrand*; *polite*, *perlite*.

A very common grammatical error is the use of *them* for *those*. "Give me *them* peaches." Shut them doors. "Open *them* windows," instead of "Give me those peaches," etc.

The objective case is sometimes used for the nominative. "*Him* and *me* are going to New-York," instead of "He and I are going" and the nominative case is also used for the objective; as "Between you and *I*," instead of "Between you and *me*." "She came to see Mary and *I*," instead of "Mary and *me*."

Who is often used where the objective *whom* is required; as "*Who* did you see?" "*Who* is this for?" instead of *whom* did you see, etc.

These and *those* are often incorrectly used instead of *this* and *that*." "Do you like *these* kind of apples?" "*Those* kind of potatoes *are* watery." You may like "these apples," and you may like "this kind" of apples, but there is no propriety in using the plural *these* with the singular *kind*. *Those* potatoes may be watery, but "*that* kind of potatoes *is* watery.

Went is often incorrectly used for *gone*; as "I should have *went* home," instead of "I should have *gone* home."

Done is used for *did*; as "I *done* it" for "I *did* it, or I *have done it*." "He *done* it," for "He *did* it."—"Hadn't ought," is used for "ought not."

Set is too often used instead of *sit*; as "Set down and rest yourselves." *Set* is an active verb, *sit*, a neuter verb. We may *set* a chair in its place, but we must *sit* in it. A hen *sits* on her eggs, but we *set* a trap for the rat that would steal them.

The use of the active verb *lay* for the neuter verb *lie*, is very common. How often we hear it said, "I *laid* down for an hour," when it should be, "I lay down." We can *lay* books down, but we *lie* down ourselves. Book's *lie* on the floor after we have *laid* them there. I must *lay* my pen aside this morning or I shall be in danger of occupying more than my share of the columns of the *Agriculturist*.

Head Cheese

Is much liked by most persons as a cold relish, and is an economical way of using the coarser parts of a pig. It may be prepared as follows: Split a hog's or pig's head in two, and remove the eyes and brains. Cut off the ears, scald them and the head, and scrape them clean, removing the discolored parts. After washing well with cold water, put into a covered kettle with nearly boiling water enough to cover it. Boil gently, removing the scum from time to time, as it rises, and cook until the bones can be easily separated from the meat. Take out all the bones, chop fine and season with salt, pepper, adding sage or thyme, if liked. Enclose it in a bag or cloth, place it in a colander set in a dish to receive the drippings, and lay a plate over it with sufficient weight to press as dry as wanted. The heavier the weight, the more lean the cheese will be, as the fat is readily pressed out. Keep it in the cloth in a cool place. It should be sliced thin for table use.

Arrow-Root Pudding.—Contributed to the *Agriculturist* by Mrs. J F. King, Wayne Co, Ga., who esteems it a great luxury: Dissolve thoroughly two heaping tablespoonfuls of Arrow-Root in a little cold milk. Heat a quart of milk to a boil and pour it upon the dissolved part, stirring it very rapidly to prevent its being *lumpy*; sweeten to taste; flavor with rose, lemon, or vanilla; just before it is to be served, beat up 8 eggs, yolks and whites, separately, mix thoroughly with the Arrow-Root, and bake in a quick oven 15 or 20 minutes.

Pumpkin Fritters.—From a subscriber at Somerville, N. J. Stew the pumpkin the same as for pies. To each pint of pumpkin add two quarts milk, three eggs, two teaspoonfuls saleratus, a little salt, and sugar to the taste. Stir in flour enough to make a thick batter. Drop a small portion at a time into hot lard and cook brown.

Pop-Overs.—Stir together one cup flour, one of sweet milk, one beaten egg, and butter the size of a walnut. Bake in small tin rounds—and they will be excellent for breakfast cakes. So writes a correspondent of the *Agriculturist* at Northampton, Mass.

Snow Corn Cakes.—Take any desired quantity of Indian meal and add sugar and salt to the taste. Stir in with a spoon twice or three times its bulk of snow. Try a little on a hot griddle; if it cooks too dry to turn well, add more snow; if too wet to be light, add more meal. Bake like buckwheat cakes.

Cleaning kettles. A bit of pearl-ash, as large as a walnut, dissolved in hot water, will remove grease from iron cooking vessels, and also take out the taste left by onions or other highly flavored food.

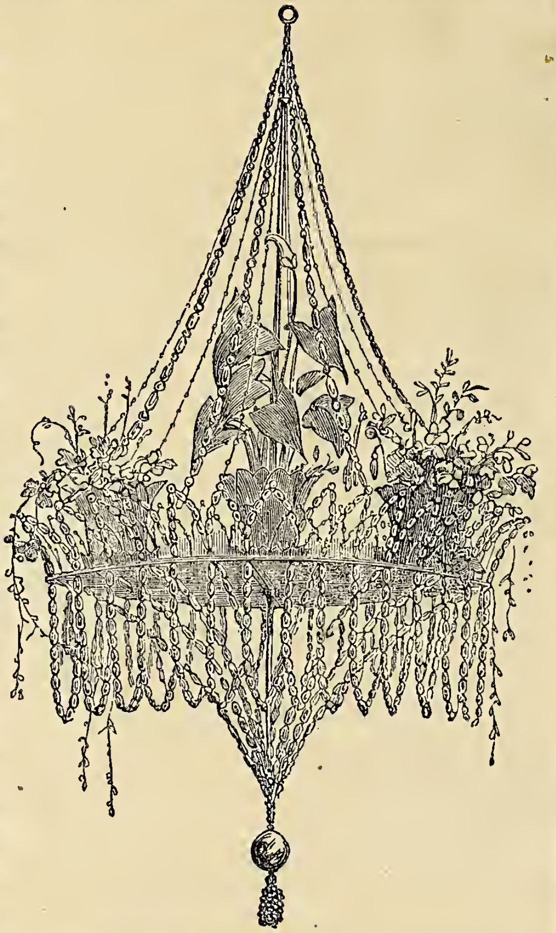
Do good yourself, if you expect [illegible]

Soda Crackers—Graham Biscuits.

[In response to our inquiry last month, p. 23, for practical directions from some experienced Baker, we are favored with the following (and more for next month) from Mr. Joseph Crozer, of Trenton, N. J., who has, we believe, had much practice in this department.—Ed.]

Mr. Editor. I notice in the January *Agriculturist* an inquiry regarding the making of Soda crackers, such as are manufactured by bakers. You may say to your lady readers in the first place, the art of the baker does not depend altogether upon the mere mixing a combination of ingredients, but his success is in a great measure due to his "ovens." Cakes, etc., baked in stoves, (such as are generally sold) would appear very different to the taste, if they were baked in an oven. But there is, also, a great difference among bakers, in the method of making soda crackers. In my experience I have found some thing like the following about the best mixture. (As I am accustomed to making up large quantities, I can not be so exact in the proportions). *For Soda Crackers.*—Set a "sponge" at night, the same as for bread. The amount, of course, depends upon the quantity to be made—say 1 pint of yeast, and 1 pint of water (warm or cold according to the weather), adding flour enough to give the proper stiffness or consistency. In the morning, or after it has risen and fallen again, (if it gets a little sour so much the better), add to the sponge about 1 pound of lard or butter, or half a pound of each—butter is the best—and *break it up* with the sponge. Then add half a handful of salt, and 1 to 1½ ounces of the best bicarbonate of soda (cooking soda) dissolved in 1 quart of water. The saleratus now sold is generally impure. Stir all together well, then mix in quickly enough flour to make it considerably stiffer than bread dough. It is not, however, mixed the same as for bread; but so as to throw the dough in parcels, or fragments. These are then rubbed over each other, somewhat like rubbing clothes on a washboard; the dough being just stiff enough to prevent their sticking to each other. When the flour is well rubbed in, press the dough in a heap together in the end of the trough or tray, and let it remain two or three hours. It is then put through the "*breaking*" process, and this is a peculiar treatment in making all kinds of good crackers. It may answer to beat it with a rolling pin on a solid board or table until the dough is smooth, and intimately mixed; then roll it out about ⅛ inch thick; cut to any sized cakes; prick well through with a fork, or something similar; set on pans and bake quick. Bakers generally set the pans on the oven bottom—which is another feature that adds to their good qualities. The baking consists in "*drying out*" nearly all the moisture, and not so much in giving them a brown color. There is not so much proportion required in the amount of "sponge," but always have enough to make it ferment readily. As an experiment, a little might be taken for trial from some bread-sponge. There are several variations in this process; each preferred by different bakers. There is, however, such a peculiar treatment required in making first quality soda-crackers, that private families need hardly expect to succeed in making them like those prepared by practical bakers. I may add here, that soda crackers acquire a bad taste if kept in a close box or drawer, especially if bad ingredients are used in making them up.

Graham Crackers may be made by using unbolted flour, when mixing the sponge into dough, or some fine bran can be added to wheat flour. The soda is left out, and less shortening used, though Grahams are generally made without setting any sponge, or the use of yeast. They must be cut thicker, and not set in so hot an oven. Breaking the dough in small pieces, and molding each one by hand, makes the best crackers. C.



Inexpensive Household Ornaments...I.

PENDANT FLOWER BASKETS.

Velvet or Brussels carpets, furniture of rosewood and damask, expensively framed pictures, and other costly embellishments, are not indispensable requisites for fitting up a room in pleasing and attractive style. All these may be present in a parlor or sitting room, and yet be so arranged as to leave no pleasant impression on the mind of the occupant, or visitor. While on the other hand, a degree of *taste* may be displayed in fitting and arranging the simplest natural objects or imitations of them, which shall call forth expressions of admiration, and leave a pleasant memory upon the mind of every visitor. We by no means include in this latter class of objects the so common plaster-casts—caricatures of birds that never flew, and of fruits that never grew, all gaudily daubed with bright colors.

These thoughts are suggested by a recent call at the cottage of a farmer in limited circumstances. In the room used both as a parlor and family sitting room, we noticed upon the mantel some pretty sea-shells tastefully arranged. With these were bouquets of dried grasses. Hung around the room were a few choice engravings, uncolored, enclosed in frames covered with pine cones and acorns, curiously and beautifully fashioned by the daughters of the household. And more pleasing than all else were living plants, some of them in bloom, supported on pendant baskets or stands.

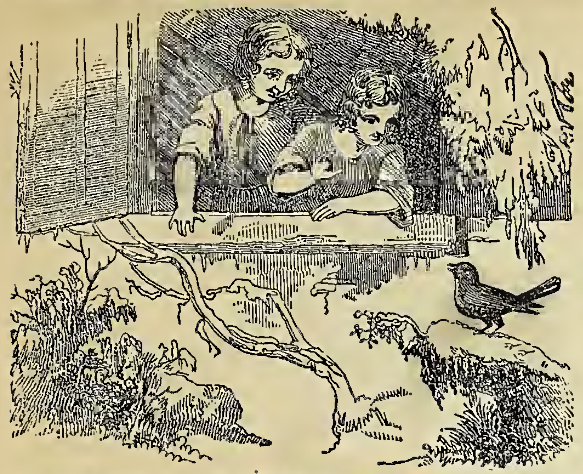
We present herewith, a design for one of these pendant flower baskets, which can be cheaply made, and which is almost as ornamental as a highly wrought chandelier. The frame work consists essentially of a flat tray made of pieces of board, sheet-iron, or zinc, cut circular, or with six or eight sides, and painted, or covered with fancy paper. This is supported by wires fastened in awl holes around the outer edge. The wires may cross each other like basket-work. Upon these are strung large glass beads, or bugles (long beads), of various colors. Festoons of wire, covered in the same manner, hang below the tray. A rod having a cross-bar screwed on the lower end, may pass through the tray, and through the central flower pot, and be fitted with a ring or hook at the top to sustain the chief weight of the whole. This rod might be made of large brass wire, and also be covered with a glass tube slipped over it. A neat tassel may be suspended from the bottom wires. A light climbing plant to run up the supporting rod looks best for the center, the others around the outside should be pendulous or trailing plants....The design here described is given as suggestive; the details of the arrangement admit of any variation to suit individual tastes.

◆

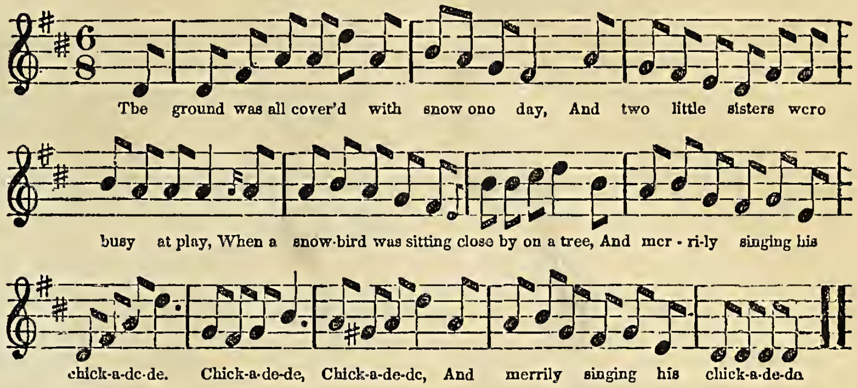
Those Coal-oil Hand-lamps.—Since our recent description of these lamps many persons have adopted them, and generally with satisfaction. But we hear of some cases where difficulty has been experienced. The manufacturers tell us that they make little effort to introduce them widely, from the fact that there are so many poor coal oils now sold in the market that they are unwilling to risk their reputation on these lamps, which require an oil of at least moderately good quality. Then, again, kitchen help make blundering work in trimming them and in gauging the flame. We have eight of these lamps in constant use at our house and business offices, and they give entire satisfaction. We burn the Carbon oil, the only pure inodorous coal oil we have yet tried. These lamps "blow out" easily, but after a short experience this occasions little trouble. They can be carried about freely, if the single precaution be taken not to give them a quick *upward* motion. The wicks should be cut off evenly, and very short, and then temper the flame by raising or lowering the draft cap. They need a little watching, (though not half so much as a tallow candle), for the fluid rises faster after they are heated than when cold. We speak thus particularly, because in our own experience these lamps have proved the cheapest, and, all things considered, the best hand lamp we have yet found and we think those who have failed to like them must have made some mistake in the mode o. using them, or else poor oil has been obtained.

◆

Potted Beef.—The coarser, tougher, parts of beef, as the neck-piece, etc., which usually sell quite cheap, may, by a little *cooking science*, be made palatable and even delicious. We have tried the following and can recommend it. Boil the meat until tender, chop it fine, and pound it with a pestle until the fibers are well separated. Salt and pepper it to taste, and add cloves, allspice, or cinnamon, as may be desirable, also a little sugar. The quantity depends upon the cook's palate. Pack it tightly in earthen jars or bowls, and pour over it a thin layer of melted butter. It will keep a long time. When used, slice it very thin and eat cold with bread and butter. It makes a nice relish for lunch or tea



UNCLE FRANK'S SONG AND MUSIC OF THE CHICK-A-DEE.


The ground was all cover'd with snow one day, And two little sisters were
busy at play, When a snow-bird was sitting close by on a tree, And mer-ri-ly singing his
chick-a-de-de. Chick-a-de-de, Chick-a-de-de, And merrily singing his chick-a-de-de

He had not been singing that tune very long,
Ere Emily heard him, so loud was his song.—
"O sister! look out of the window," said she;
"Here's a dear little bird, singing chick-a-de-de.
Chick-a-de-de, &c.

"Poor fellow! he walks in the snow and the sleet,
And has neither stockings nor shoes on his feet;
I pity him so! how cold he must be!
And yet he keeps singing his chick-a-de-de.
Chick-a-de-de, &c.

"If I were a barefooted snow-bird, I know
I would not stay out in the cold and the snow.
I wonder what makes him so full of his glee;
He 's all the time singing that chick-a-de-de.
Chick-a-de-de, &c.

"O mother! do get him some stockings and shoes,
And a nice little frock, and a hat, if he choose;
I wish he 'd come into the parlor, and see
How warm we would make him, poor chick-a-de-de
Chick-a-de-de, &c.

The bird had flown down for some pieces of bread,
And heard every word little Emily said;
"What a figure I 'd make in that dress!" thought he;
And he laughed, as he warbled his chick-a-de-de.
Chick-a-de-de, &c.

"I 'm grateful," he said, "for the wish you express,
But I 've no occasion for such a fine dress;
I had rather remain with my limbs all free,
Than to hobble about, singing chick-a-de-de.
Chick-a-de-de, &c.

"There is ONE, my dear child, though I cannot tell who,
Has clothed me already, and warm enough too.—
Good morning! O who are so happy as we?"—
And away he went, singing his chick-a-de-de
Chick-a-de-de, &c.

The Editor with his Young Readers.

The Snow Birds came to us later than usual, this Winter; the first one we have seen, was warbling his chick-a-de-de at our window this very morning, Jan. 12, and he quickly departed; but just now there are a dozen or so more, and they remind us of that beautiful song written by our late "Uncle Frank," (Francis C. Woodworth), who also composed the music for it. Probably most of you have heard and sung both the words and tune, but we suspect that a good many of the younger boys and girls may not know them, and for their benefit we will hunt up both song and notes and put them on this page, and also give his pretty picture of the two little girls who were 'busy at play' when the Snow bird came singing at their window. We would like to have you all learn, and sing this song. We can hardly believe that any boy who sings or even reads these words, would ever after try to kill these innocent birds, as we have seen some do before now. By the way, we think

EVERY BOY OUGHT TO LEARN TO SING.

A great many boys—a few of them in our own Sunday School—seem to think it beneath their dignity to join their sisters and comrades in singing. This is a false notion. There is nothing that tends more to soften a rough, harsh nature, than to engage heartily in singing. One who was speaking of Burns, the Scottish Poet, remarks to this effect: "The Scotch are the most peaceable people in the world: very few are the quarrels or brawls occurring among them in their own land, or when they go abroad. This may, in part, be attributed to the fact that in Scotland every boy and girl learns to sing. If a company of old or young people get together for an evening, instead of disputing and gossiping, they spend most of their time in singing the sweet songs of Burns and of other poets. The children begin to sing as soon as they can speak; they *all* learn to sing very young, and never stop, and their songs and music have a great influence over their characters.." Some one has said: "Let me make the songs of a people, and I care not who makes their laws," meaning that the songs have more power than the laws, in forming, modifying or changing characters....If all boys were early taught to sing well, and then kept singing until they grew up, we believe there would be fewer bad, quarrelsome boys and men. Learn to sing then, boys; sing going to work; sing at the plow; sing every where when you will not disturb others. Don't let any anybody frighten you by telling you, you can not sing. *We* believe that about every boy, who is not a deaf mute, *can* sing, and with proper training can sing well too.

A PLEASANT PLAY.

A friend of the Agriculturist Family sends us the following description of a play for the young folks, and old folks too, which we like because it sets them to thinking, and is also good sport. One of the company repeats a few lines of poetry, or a familiar proverb, or relates a short anecdote. When he has finished, another quotation is to be repeated by whoever can first think of one commencing with the same letter that closed the previous recitation. One may say

"Art is long and time is fleeting,
And our hearts though stout and brave,
Still like muffled drums are beating
Funeral marches to the grave."

The next one must commence his piece with the letter *E*—for example thus: "Every wind is fair that drives to port." Then *T*, will be the initial letter, and so on. The play may be varied by making it a geographical or historical exercise. Thus, one names a town, and describes its location, the next one gives a geographical or historical name commencing with the last letter of the word chosen previously, and adds a short description. A friend was present at one time when our great American Poet, BRYANT, and a large company were amusing themselves with the game. On this occasion, as several were poets, each was required to repeat a verse of poetry, and close by naming the author. Many beautiful verses were recited, and when Mr. Bryant's turn came, all expected to hear something very fine. He rose and with great gravity gave: "In Adam's fall
We sinned all.—*Authority;* New-England Primer." You may well suppose there was great laughter.

THE BACHELOR'S GIFTS.

Another play we saw performed for the first time the other evening by a company of young people, which amused us very much. It may not be new to most of you. We never had time to play much when a boy, and don't know all the plays—there were too many roots to pick up in the meadows, and too much other work on the farm, to admit of much play—perhaps this is one reason why we like so well to be a boy with the young people now. But to the play. The company all stood in a circle, and one was chosen to put questions. He went round and asked every one what gift he or she would make to a bachelor. One said a box, another a chair, another a bed, another a tea-kettle, and so on. He then went round again and asked a lot of questions. Each one was to answer every question by repeating the first word named, and do so without laughing. If any one laughed he was counted out of the ring. One grave young man who had named a tea-kettle as his gift, it was thought would maintain his gravity. The following was the result: "What did you say you would give the bachelor?" "A tea-kettle"—"What do you boil your potatoes in?" "A tea-kettle"—"What do you feed your pigs in?" "A tea-kettle"—"What do you eat out of?" "A tea-kettle"—"What do you catch fish in?" "A tea-kettle"—"What do you ride to town on?" "A tea-kettle." Of course a general roar of laughter followed here, in which the questioned party joined and was counted out.

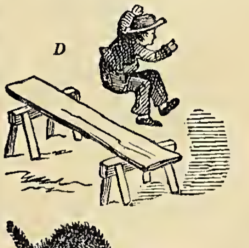
"SERVED HIM RIGHT."

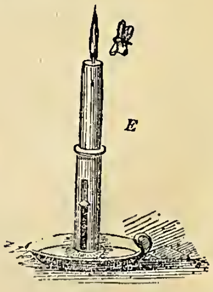
Last Winter a young man of our acquaintance went to a mill pond to skate. A short time before, a large quantity of ice had been cut out for filling ice houses, and it had frozen over again, but not sufficiently hard to bear a person. Our friend ventured upon it, and immediately found himself floundering in the water, but being an expert swimmer, soon made his way out. A fellow in the neighborhood met him as he was all dripping from his plunge, and instead of sympathizing with him, or even pleasantly laughing at him about the mishap, coarsely called him a "fool," saying "it served him right, he ought to have known enough to keep off the ice." Shortly after, this fellow crossed the pond on his way home, stepped on a weak spot, and down *he* went, splash into the water. He was rescued with some difficulty, amid the jeers of the bystanders, who told him in his own words, "he ought to have known better." He who reproaches the unfortunate will receive little sympathy in his own misfortunes.

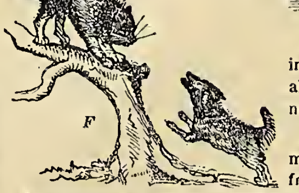
THE POOR BECOME THE RICH.

How many times young people wish they were born rich. But this is not a wise desire. We happen to know quite a number of rich men, but nine out of every ten of these persons were the children of poverty. The fact is, it requires just that kind of discipline which struggling with poverty in early life gives one, to develop those habits of self reliance, activity, economy, and energy, which will carry a man forward to wealth and position. This is certainly so—we could quote the example of nearly every wealthy man we know, to prove it. Our young friends, who have perhaps often wished their parents were wealthy, and that they were *only* children may console themselves with the thought that it will in the end be better for them, than if their wishes were gratified, though it may not appear to be so pleasant just now.

NEW PROBLEMS.—No. 4. PUZZLING PICTURES.







D, represents a boy in danger of drowning, although we are sure, no water is near.

E, reminds us of a man just getting off from his horse.

F, resembles a very good table sauce in common use.

No. 5. A man contracted to purchase the apples from a tree, agreeing to give $10 for them if there were 10 bushels, and $18 if there were 20 bushels. 18 bushels were gathered. How much ought he in justice to pay?

No. 6. *Rebus.* $\underset{2}{\text{——}}$: 'L B B B B L E D H I S $\frac{\text{C C C C}}{\text{D D D D}}$
an D 3 X D $\underset{\text{throw}}{\text{——}}$ 60 minutes T T T T.

ANSWERS TO PROBLEMS.—The "Labyrinth," in the Dec. No. 1859, was successfully entered by W. H. Adams, Jas. H. W. Abbott, Willie B. (sends his best respects to Aunt Sue and the rest of the family), W. A. Buckhout, C. W. L. Smith, Franklin Adams.

ARITHMETICAL PROBLEM.(No. 1.) in Jan. No. A, must pay 4 and 3-16 cts. per lb. B, 3 and 11-16 cts. per lb. Solved by, Elizabeth B. Cully, "M. F.", Ralph Lefevre, C. A. Heilig, R. C. Flickinger, David Hooker.

Word Rebus (No. 2.).—Ans.

"He that by the plow would thrive,
Himself must either hold or drive."

Read aright by H. R. Dagget, Elizabeth B. Cully, Ralph Lefevre, C. A Heilig.

Puzzling Pictures (No. 3.).

A. The skeleton is evidently a bony part (Bonaparte).

B. The man pushes the *L*, which we may properly call shove L (shovel).

C. The poor cur is dead, and as cheese is cur-ded, there is quite a resemblance.

A SHORT CHAT

is all we have time for this month, young friends, for there are so many letters arriving now, that it takes all our time to attend to them, and to look after business, seeds, premiums, etc., etc. After a few weeks, this hurry will be over, and then we will sit down and have long talks with you. Some few people still complain of the amount of space devoted specially to our juvenile readers. But we can not help it. We believe in giving much attention to the young plants in our garden—to start them right. "Just as the twig is bent the tree's inclined."

* * *

Premiums.

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.*

☞See remarks following the premiums.

Premium III.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies (that is one extra copy), for the coming year.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8½ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles. (Expense after leaving the city to be paid by recipient.)

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines**, new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two year's use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia*, now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Publisher's price, $45.

Premium XIII.—To every person sending 260 *new* subscribers at $1 each, or 330 at the lowest club price (80 cts. each), we will present one of *Allen's Mowing Machines*, with sundry improvements now being added. This is one of the best we have seen in operation. Price $115. Other kinds of Machines of the same price, will be substituted, when specially desired, if satisfactory arrangements can be made with the manufacturers.

Premium XIV.—To every person sending 65 *new* subscribers, at 80 cents each, we will present one of the best *Eagle Plows* (2-horse). Price $11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 *new* subscribers at 80 cents each, we will present the best *Sub-soil Plow* (two-horse), price $9; *or* one of the best *Horse-Hoes* price $8; *or* one of the best *Straw and Hay Cutters*, price $8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 *new* subscribers, at 80 cents each, we will present one of the best *Steel-tooth Cultivators.* Price $7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best *Hand Corn Shellers.* Price $6 50.

Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3,) or a *Double mold-board (ridging) Plow.* Price $3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, the publisher will pay premiums in books as follows: Every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from A. O. Moore's Catalogue, (which is advertised on page 315 October Agriculturist) to the amount of 10 cents for every subscriber, sent in at 80 cents each. Persons making up a club for any of the premiums, and getting some names over the required amount, will be entitled to books for the surplus names. Thus, a person getting 55 subscribers can take for 45 names premium VII. or XVII, and also $1 worth of books for the extra 10 names; and so in other cases.

REMARKS.—1. *The above premiums, except No. IV, are all for* NEW SUBSCRIBERS ONLY, *as we can only afford to pay premiums for once on the same subscriber. But* ☞*in making up any premium lists, three renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞*Names need not all be at the same Post Office.*

2. Of course but one premium can be paid on the same name. The canvasser will choose his own premium. Any one striking for a higher premium, and failing to get names enough, can still fall back upon a lower one.

3. Every person collecting names for premiums can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

4. The above premiums are offered for new subscribers for Volume XIX (1860) Canvassers will have at least a month or two for completing their lists, but the premium will be paid as soon as any list is made up.

* * *

Seeds for Free Distribution in 1860.

Each person whose paid subscription to the American Agriculturist *extends beyond February*, 1860, *will be entitled to select four or five parcels of seeds from the general list given in the next column—if the following conditions be complied with.*

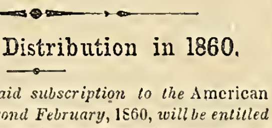
A. It is of absolute importance that the following directions be *strictly* followed, even to the minutest particulars. We have 80 distinct varieties of seeds, to be distributed among 70,000 or more persons scattered all over the country, which, at the best, will involve immense labor, and some mistakes must unavoidably occur, unless each subscriber take special pains to facilitate the work.

B. The seeds can now be called for at the office, or be sent by express, or in ready prepared envelopes furnished by the subscribers, as described below.

C. Subscribers at different points can estimate whether they can receive their seeds cheapest by Mail to separate individuals, or in a package by Express.

D. If to go by Express, no envelopes will be needed. In that case, simply send us a written list of the names, marking against each name the kinds of seed desired, *using the numbers in the Catalogue.* Keep a copy of the list sent, and give particular directions *on each list*, how the package is to be forwarded, and to whom directed.

E. If to go by *mail*, the applicant will (of course) furnish *prepaid* envelopes, of ordinary size, which should be prepared as in the engraving here given—that is: Put the figures corresponding to the Catalogue plainly on the upper left hand of the envelope, and put all the postage stamps upon the right side of the envelope—one above the other when two or more are needed, as shown in this pattern. This will prevent the seeds being crushed in the stamping process, in the Post-Office. One ordinary envelope will generally hold the amount of seed-packages carried by two or three stamps. ☞ *The amount of stamps can be calculated from the Catalogue. Single 1-cent stamps on letters are of no value, unless there be even threes of them, as letter postage is rated by the half ounce.*



F. Let all letters referring to seeds be as brief as possible, and yet plain. All such communications are referred directly to the clerk superintending that department. It is especially desirable that whatever relates to seeds should be on a *separate* slip of paper. (We shall probably distribute over *three hundred thousand packages*, and a minute's time saved on each of these would amount to 500 working days of 10 hours each—or nearly two years!)

G. Canada subscribers will need to substitute 10-cent stamps in all cases where 3-cent stamps are named in the catalogue. When several send together, it will usually be cheaper to receive seeds by Express. (Postage is not necessarily prepaid *here*, on Canada letters.)

H. Always put the stamps upon the envelopes, and not drop them loosely into the enclosing letter.

I. It is always better to send envelopes of the ordinary size, and made after what is called the "Government pattern,"—that is, those in which the back comes under the piece lapping over; these seal up more firmly. This point is not essential, however.

J. Usually, the *lighter* the envelope the better, that more seeds may go under the same stamps.

K. Send only the number of stamps required for postage on the seed. We have no seeds of any kind to *sell.*

L. Those forwarding *unpaid* envelopes, will, of course, not be disappointed if they do not return. We offer seeds *free*, but cannot, in addition, afford to pay postage also.

M. All seeds sent by mail are put up at our country residence, and each package is there mailed *direct*, to avoid its being overhauled at the Distributing offices.

N. ☞ We shall take time to mail all the seeds carefully and regularly. This will occupy the entire month of February. Those going to distant points, where the seasons are earliest, will be mailed first.

LIST OF SEEDS.

[For Descriptive Notes upon these Seeds see pages 3 and 4 of January number.]

Field Seeds.

2—Improved King Philip Corn—Single, double, or triple packages, as may be desired, requiring one, two, or three 3-cent stamps.
3—Stowell's Sweet Corn—Same packages as No. 2.
94—Crystal Flint or Hominy Corn—Same as No. 2.
6—Ashcroft's Swedish Turnip—Half of 3-cent stamp.
7—River's Swedish Stubble Turnip— do. do.
70—Waite's London purple-top Swede Turnip—do.
98—Long Red Mangold Wurtzel—One 3-cent stamp.
101—Improved Long Orange Carrot—½ of a 3-cent stamp.

Vegetable or Garden Seeds.

8—Daniel O'Rourke Pea—Packages same as No. 2.
9—Champion of England Pea—One 3-cent stamp.
99—Prince Albert Pea— do. do.
57—Eugenie Pea— do. do.
58—Napoleon Pea— do. do.
12—Green Kohl Rabi—One-third of a 3 cent stamp
13—Enfield Market Cabbage— do. do.
15—Mammoth Cabbage Lettuce— do. do.
63—London Particular Long Scarlet Radish—do.
64—Extra Red Round Turnip Radish— do.
100—Early Purple Cape Broccoli—do. do.
21—Winter Cherry— do. do.
95—Hubbard Squash— do. do.
102—Mammoth Leghorn Squash—do. do.
108—Mammoth Pumpkin— do. do.
109—Mammoth Red Tomato— do. do.
72—Imported Brussels Sprouts— do. do.
76—Musk Melon— do. do.
77—Water Melon— do. do.
103—Sage— do. do.
104—Thyme— do. do.
105—Chili Red Pepper— do. do.
106—Sweet Marjoram— do. do.
17—Red Strap-Leaf Turnip—One-half of a 3-cent stamp.
74—Solid White Celery— do. do.
75—Green Curled Endive— do. do.
55—White Globe Onion— do. do.
71—Long White French Turnip—One 3-cent stamp.
107—Giant Asparagus— do. do.

Flower, Fruit, and Ornamental Seeds.

89—Cotton Plant (2 kinds)—One 3-cent stamp.
90—Norway Spruce Seed—One-half of a 3-cent stamp.
91—Arbor Vitæ Seed— do. do.
111—Castor Oil Bean— do. do.
110*—New-Rochelle Blackberry—½ of a 3cent-stamp.

On an average about five of the following 40 *varieties will go under a 3-cent stamp*

23—Mignonette.
25—Mixed Nasturtiums.
27—Extra Cockscomb.
29—Double Balsams, mix'd.
30—Tassel Flower.
31—Chinese Pink.
32—Portulaccas, mixed.
33—Cypress Vine.
34—China Asters, mixed.
35—German Asters, mixed.
38—Sweet William.
40—Escholtzia Californica.
42—Foxglove.
47—Morning Glory, mixed.
49—Candytuft.
50—Schizanthus.
51—Phlox Drummondii.
78—Ageratum Mexicanum.
80—Yellow Hawkweed.
82—Thunbergia.
83—Snap Dragon.
84—African Marigold.
85—Gaillardia, mixed.
86—Euphorbia, mixed.
87—Coreopsis.
113—Double Sun Flower.
114—Mixed Petunia.
115—Mix. Dbl. Hollyhocks
116—Mourning Bride.
117—Mix. Dbl. Wallflower
118—Bee Larkspur.
119—M'd Chrysanthemums
120—Clematis (Climber.)
121—Trumpet Creeper.
122—M'd Canterbury Bells
123—Gilia nivalis.
124—Whitlavia.
126—Long-tubed Centranthus.

(Official.)

Agricultural Convention at New Haven.

TO BE HELD DURING THE MONTH OF FEBRUARY, 1860.

[We have already announced the important agricultural and horticultural convention to be held at New-Haven, the present month, and have advised every one who can do so to attend during the entire month. Below we give the official Programme of the lectures to be given. As each lecture will be followed by questions to the lecturers and discussions by the attendants, one can hardly fail to obtain a vast amount of practical information at comparatively little expense. The names of the lecturers given below are a sufficient guaranty of the importance and value of the course. Had it been compatible with our other engagements, we should gladly have responded to the invitation to take part in the exercises; as it is, we hope to attend as a listener, at least a part of the time.]

FIRST WEEK.—Science in its Relations to Agriculture.

Chemistry.—Prof S. W. Johnson.
Meteorology.—Prof. B. Silliman Jr.
Entomology.—Dr. Asa Fitch.
Vegetable Physiology.—Daniel C. Eaton.

SECOND WEEK,—Pomology, etc.

General Pomology.—Hon. M. P. Wilder.
Grapes.—Dr. C. W. Grant.
Berries.—R. G. Pardee Esq.
Fruit Trees.—P. Barry Esq
Fruits as Farm Crops.—L. F. Allen, Esq.
Arboriculture.—Geo. B. Emerson Esq.
Agricultural Chemistry.—Prof. S. W. Johnson.

THIRD WEEK.—Agriculture Proper.

Drainage.—Hon. H. F. French, Esq.
Grasses and Irrigation.—J. Stanton Gold.
Cereals.—Joseph Harris Esq.
Hops, Tobacco &c.—Prof. Wm. H. Brewer.
Cultivation of Light Soils.—L. Bartlett, Esq.
English Agriculture.—L. H Tucker, Esq.
German Agriculture.—Dr. Evan Pugh.
Agricultural Education and Statistics.—Prof. John A. Porter.

FOURTH WEEK.—Domestic Animals, &c., &c.

Principle of Stock Breeding.—Hon. Cassius M. Clay.
Stockbreeding in the U. S.—Lewis F. Allen Esq.
Breeding for the Dairy.—Charles L. Flint, Esq.
Horses.—Sanford Howard, Esq.
Breaking and Training Horses.—Dr. D. F. Gulliver.
Root Crops and Sheep Husbandry.—T. S. Gold, Esq.
Pisciculture.—John C. Comstock, Esq.
Rural Economy.—Donald G. Mitchel, Esq.
Agricultural Associations—Mason C. Weld Esq.

ARRANGEMENTS. An average of three lectures per day will be given from Feb. 1st to Feb. 25th, inclusive, making sixty six Lectures in all. For the accommodation of persons desiring to spend Sunday at home, there will be no Lecture on Saturday afternoon or Monday forenoon. Each Lecture will be followed by questions and a discussion. Persons attending the Lectures will have the liberty of introducing other topics besides those of the above list, and thus eliciting information adapted to their own case. Among other distinguished gentlemen, beside the Lecturers, who will attend, John Johnston, Esq. of Geneva, the pioneer in American Tile Drainage will be present during the third week of the course, to give any information desired as to his own experience in Drainage. This Course of Lectures will be made intelligible and useful to beginners in Agriculture, as well as to experienced Farmers. Board at very reasonable prices may be obtained by early applicants. Tickets for the whole Course, $10. For any single week $3. Single lecture 25 cts. For a detailed programme with subjects of each of the sixty-six Lectures address Prof. JOHN A. PORTER, New Haven, Ct.

* * *

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Thursday Evening, Jan. 19, 1860.

The transactions in Breadstuffs have been quite limited, since the date of our last. The receipts have been light, and the stocks on hand have been reduced somewhat. Prices have fluctuated throughout the month. The inquiry for Flour has been moderate. The home traders have been the principal buyers. Shippers have been disposed to purchase freely, but at prices which have not been generally satisfactory to holders, who claimed higher rates, and partially succeeded in establishing an advance, which has prevented an active trade. The recent tightness in the money market has worked against holders of produce. Some of them have been compelled to dispose of their supplies, and the efforts to do so, have had the effect of depressing prices, which now have a downward tendency. The stock of all kinds of wheat flour in this market, on the 1st of January, amounted to 917,529 bbls., against 741,541 bbls. at same date in 1859, and 603,150 bbls., at the beginning of 1858. It is believed that the quantity here at the present time is rather less extensive....Wheat has been less freely offered, and higher prices have been demanded. The inquiry has been restricted, and mainly from millers and shippers. Some speculative purchases have been made on Western account. The market is now heavy, and the tendency of prices downward. The stock of Wheat here on the 1st of January comprised 1,915,388 bushels, against 1,211,312 bushels the 1st of January 1859, and 389,000 bushels at the beginning of 1858....Corn has declined materially; the demand having been quite moderate. The stock on hand January 1st, was only 79,400 bushels, against 669,690 bushels January 1st 1859, and 97,000 bushels same date in 1858....Rye has been quiet and languid. Stock on the 1st of January; 30,500 bushels, against 43,500 bushels, same time last year....Barley has attracted less attention, and prices have favored buyers. On January 1st there were 560.544 bushels on hand, against 807,416 bushels same time in 1859....Oats have been moderately sought after at rather lower rates. Stock here 1st of January 1,576,100 bushels, against 560,200 bushels January 1st, 1859....By reference to our previous issue, it will be noticed that our estimate of the stocks of Flour and Wheat here, approach very closely to the actual amount found to be on hand.... Cotton has been in request at, however, a shade easier prices... Hay, Hops, and Tobacco have been in good demand. Hay has advanced materially. The stock is limited....Hemp, Seeds, and Wool have been sparingly inquired for....Provisions and Rice have been moderately dealt in....The transactions in most other kinds of Produce have been limited.

CURRENT WHOLESALE PRICES.

	Dec. 19.		Jan 19.	
FLOUR—Superf to Extra State	$4 95	@ 5 25	$5 20	@ 5 45
Common Western	4 90	@ 5 10	5 20	@ 5 30
Extra Western	5 15	@ 7 00	5 35	@ 7 50
Fancy to Extra Genesee	5 30	@ 7 00	5 50	@ 7 25
Super. to Extra Southern	5 55	@ 7 25	5 60	@ 7 25
RYE FLOUR—Fine and Super.	3 60	@ 4 40	3 60	@ 4 40
CORN MEAL	3 80	@ 4 25	3 85	@ 4 25
WHEAT—Canada White	1 35	@ 1 40	1 37½	@ 1 45
Western White	1 37½	@ 1 50	1 37½	@ 1 40
Southern White	1 40	@ 1 55	1 40	@ 1 55
All kinds of Red	1 11	@ 1 35	1 19	@ 1 35
CORN—Yellow	90	@ 1 00	82½	@ 85
White	96	@ 93	82	@ 05
Mixed		@ 1 00	83	@ 04
OATS—Western	46½	@ 47¼	45	@ 46
State	46½	@ 47¼	45¾	@ 46½
Southern	42	@ 44	40	@ 43
RYE	88	@ 93	88	@ 91
BARLEY	75	@ 88	75	@ 88
White Beans	1 00	@ 1 30	1 00	@ 1 20
HAY, in bales, per 100 lbs	85	@ 1 00	1 12	@ 1 25
COTTON—Middlings, per lb	11¼	@ 11⅝	11	@ 11¾
RICE, per 100 lbs	3 50	@ 4 37½	3 50	@ 4 25
HOPS, crop of 1859 per lb	12	@ 10	12	@ 18
PORK—Mess, per bbl		@ 16 00	16 12	@ 16 25
Prime, old, per bbl	11 37	@ 11 50		@ 11 50
BEEF—Repacked Mess	9 00	@ 9 75	9 00	@ 9 62½
Country mess	5 12½	@ 5 50	5 00	@ 5 25
HOGS, Dressed corn, per lb	7	@ 7½	6¾	@ 7⅛
Lard, in bbls. per lb	10¾	@ 11	10¼	@ 10⅝
BUTTER—Western, per lb	11½	@ 18	12	@ 17
State, per lb	14	@ 21	15	@ 23
CHEESE, per lb	8	@ 11	9	@ 11½
EGGS—Fresh, per dozen	20	@ 24	21	@ 24
Limed— " "	16	@ 17	17	@ 18
POULTRY—Fowls, per lb	8	@ 10	8	@ 12
Geese, per lb	8	@ 10	8	@ 10
Ducks, per lb	10	@ 12	11	@ 13
Turkeys, per lb	10	@ 11	10	@ 13
Venison, per lb	8	@ 11	8	@ 11
FEATHERS, Live Geese per lb.	43	@ 52	43	@ 52
SEED—Clover, per lb	8	@ 8⅝	8	@ 8¾
Timothy, per bushel	2 00	@ 2 62½	2 12½	@ 2 75
SUGAR, Brown per lb	6¼	@ 8¾	6½	@ 8¾
MOLASSES, New-Orleans, pr gl	50	@ 51	51	@
COFFEE, Rio, per lb	10¾	@ 12¾	10¾	@ 12½
TOBACCO—Kentucky, &c. pr lb	4½	@ 12	4	@ 12½
Seed Leaf, per lb	6	@ 25	6	@ 25
WOOL—Domestic fleece, per lb.	37½	@ 62½	33	@ 62½
Domestic, pulled, per lb	30	@ 52	30	@ 52
HEMP—Undr'd Amer'n pr ton.	125	@150	120	@150
Dressed American, per ton	165	@200	160	@200
TALLOW, per lb	10½	@ 10¾	10½	@ 10¾
OIL CAKE, per ton	28 00	@35 00	27 00	@35 00
APPLES—Dried, Per lb	6	@ 7½	6	@ 8
Dried Peaches—pr lb. South'n	10	@ 17	10	@ 17
POTATOES—Mercers, p. bbl.	1 50	@ 2 00	1 75	@ 2 13
Peach Blows, per bbl	1 25	@ 1 75	1 25	@ 1 62
Sweet, Virginia, per bbl	1 50	@ 1 75	None offering.	
Delaware, per bbl	2 50	@ 2 75	3 00	@ 3 25
Cabbages, per 100	2 50	@ 3 50	3 00	@ 5 00
Onions, Red, per bbl	1 75	@ 2 00	1 62	@ 1 75
White and Yellow, per bush	1 75	@ 2 50	1 75	@ 1 87
Squashes, Marrow, p. bbl	2 50	@ 5 00	1 75	@ 2 00
Turnips, Rutabaga, per bbl	88		1 13	@ 1 25
APPLES, Winter, per bbl	2 25	@ 4 00	2 25	@ 3 50
Cranberries, per bbl	15 00	@17 00	12 00	@14 00
Hickory Nuts, per bush	1 00	@ 1 25	1 25	@ 1 50

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats*
25 bus days *this* mon.,	126,630	74,900	179,550	3,900	23,875	141,600
24 bus. ds. *last* mon.,	523,050	533,347	204,776	43,461	413,577	815,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 business days *this* mon.,	261,750	192,800	435,500	24,100	45,000
24 business days *last* mon.,	450,470	571,150	386,700	67,400	362,100

The following are the EXPORTS of the principal kinds of BREADSTUFFS, from the Atlantic ports of the United States, since Sept. 1:

TO GREAT BRITAIN AND IRELAND.

From	*To date.*	*Flour, bbls.*	*Wheat, bu.*	*Corn bu*
New-York	Jan. 13, '60	170,773	411,421	....
New-Orleans	Jan. 1, '60	4	....	....
Philadelphia	Jan. 10, '60	3,956	52,821	....
Baltimore	Jan. 5, '60	....	....	....
Boston	Jan. 6, '60	731	....	....
Other Ports	Jan. 1, '60	15	....	....
Total from Sept. 1, '59		175,479	464,242	....
To about same period, 1858		83,787	412,425	319,352
To about same period, 1857		444,055	3,088,120	680,234
To about same period, 1856		554,275	6,417,428	2,431,880

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been pretty well supplied during the past month, but not largely overstocked. The heavier weights of the bullocks recently brought in have added more to the actual amount of meat, than the numbers would indicate. The largest bullock ever sent to this market, was sold one week ago for $850. He was a Durham ox, seven years old, raised in Dutches Co., N. Y., and weighed upon the scales at the yards, 3,452 lbs. gross. One fat pair of premium beeves brought near $700. For the five weeks ending Jan. 18, the receipts were 20,038 or an average of 4,007 per week. At yesterday's general market, Premium beeves brought 10c.@10½c.; First quality, 9½c.@10c.; Medium, 8c.@8½c.; Poor and ordinary, 5c.@7c; with an average of 7½c.@7¾c., for all the animals sold.

1859—Total receipts of Beeves, in N. Y. city....205,396
Weekly average.......................... 3,950

VEAL CALVES.—Receipts for five weeks past, 1,984—a falling off from previous weeks. Prices range at 5c. to 7c. per lb., live weight, according to quality.

1859—Total receipts in N. Y. city..................38,513

SHEEP AND LAMBS.—These come in less freely, and command better prices. For the five weeks just ended 49,014 live sheep have been sent to this market, besides large numbers of dressed carcasses. They are now in fair demand at prices equivalent to 5½c.@6c. pr. lb live weight for good fat sheep, and from that down to 4c. pr. lb.

1859. Total receipt of Sheep in N. Y. city.......508,791
Weekly average..........................9,784

HOGS.—Receipts have been large, footing up 66,776 for the past five weeks, which is an average of 13,355 pr. week. Besides these there have been very large arrivals of dressed hogs, many of them in a frozen state. Prices have mainly ruled low. They are now selling at 5½@5¾c. per lb live weight, for corn-fed, and 4¾c.@5½c. for still fed.

1859. Total receipts of Hogs in N. Y. City...... 392,525

The Weather for the month ending Jan. 18th, has at times been extremely severe. Considerable snow has fallen, and sleighing has continued rather longer than is usual. The season is, thus far, generally considered good for winter grain, and on the whole the month can not be called unpleasant. OUR DAILY NOTES, condensed, read thus: *December* 18, cloudy—19, clear and fine—20, rainy—21, 22, cloudy and cool—23, clear and cool—24, 25, clear and cold—26, cloudy and mild—27, clear and growing cold—28, coldest day of the season, cloudy A. M., snow P. M.—29, cold; cloudy A. M., snow P. M.—30, cloudy A. M., clear P. M.—31 clear and cool—*January* 1, 2, 3, clear and cold—4, snow storm—5, 6, clear and cold, good sleighing—7, cloudy and mild, rain at night melted most of the snow—8, cloudy A. M., clear and warm P. M.—9, clear and warm—10, foggy, cloudy and warm—11, the same, with rain and snow at night—12, snow A. M., clear P. M.—13, clear, moderate rain and snow at night—14, snow and rain—15, 16, clear and mild—17, cloudy and mild—18, cloudy, and warm.

* * *

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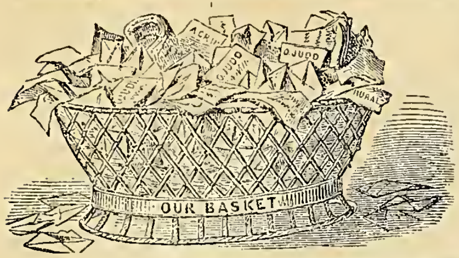

Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

To Correspondents.—An unusual lot of communications, hints, suggestions, and queries are coming in daily with the letters enclosing subscriptions. We have also several letters received heretofore, but laid aside for consideration. Not unfrequently a query is kept for months in order to make investigations, or to find time and place for a reply. We are thankful for the many favors received, but trust our friends will be patient if we sometimes keep their letters on hand for months, until a seasonable opportunity occurs to introduce them. Very often a studied article is suggested by a dozen or twenty queries, without referring directly to them.

One other item. We try to adapt articles to the season in part, and often prepare items which lay over until their appropriate time. Further, the length of time required to work off the large edition of the inside sheet, which contains most of the illustrations, and must be printed slowly, compels us to prepare all matter for that sheet, and send it to press a month in advance, and articles appropriate to those pages (9 to 24) must be on hand several weeks before they can appear.

The New American Cyclopædia.—Vol. VIII. of this valuable work, from the publishing house of D. Appleton & Co. has come to hand freighted as usual with stores of information packed in well written, condensed articles. The topics, arranged alphabetically extend from FUG, to HAY, covering a space of 747 double column pages and numbering some 1600 separate articles. Science, Art, Biography, History, in short every department of knowledge is drawn upon to make the work what it professes to be, a compendium of what is known.

Sending Grafts by Mail.—M. M. Ferguson, Williamson Co., Texas. Cuttings for transmission by mail should have their cut ends coated with wax, or gum-shellac dissolved in alcohol, wrapped in oil silk to retain the moisture, and so enveloped as to be secure from injury by rubbing. Secured in this way they will go safely to distant points. A subscriber sent a parcel to Fort Laramie, N. T., last Winter, which are now thriving.

Aphis, or Plant Louse.—J. Morton, Reufew Co., C. W. The new shoots of your young apple trees are infested by green, or plant lice. They can be easily destroyed by a pretty strong decoction of tobacco water. Steep the stems or waste of tobacco for twenty four hours, and with a pail of the liquor, go among the trees bending the infected shoots into the water which will quickly kill the aphides. It is well to make a trial or two before using it extensively, reducing with water if needed, for if too strong it may injure the twigs.. Sprinkle or syringe those branches which can not be dipped repeating the process if a second brood of insects appear.

Grub or White Worm in Apple Trees—Borers.—E F. Maynard, M. D., Essex Co., N. J. The white grub with a dark head, you describe, is that destructive pest, the apple borer (*Saperda bivittata*) of which both the worm and winged parent are shown on page 50 (Feb. No.) of volume 17. A full chapter upon the insects is there given, and another article on page 243 of the same volume (Aug. No.), to which we refer you. There are numerous hints on the same subject in the Orchard Calendar of recent papers. Several other inquirers will find their questions answered as above.

Taylor's Tree Protector.—J. C. J., of New Castle, inquires for the results of actual trials with this apparatus the past year, by those uninterested in its sale. He adds: "It has always been understood that it is the Codling moth which produces the worms in apples by stinging the young fruit. But said moth being a winged insect, he would hardly stop to wade the troughs on the trunks to get to the branches."

Bugs.—J. A. Stuart, Middlesex Co., Mass. The "creeping thing" you sent us is not recognized, either as friend or foe; being dead and crushed when taken from the mail, we are unable to watch its transformation. Observation of their habits in their several states is the best means of ascertaining whether they are injurious.

Timothy—Herds-grass—(To several subscribers.)—These are only different names for the same variety. It is best sown in the latter part of August, and in the month of September. It may be put in with grain or alone. Many farmers prefer the latter. Plow and harrow as for grain, sow a half bushel to the acre, and cover with a brush harrow. It may also be mixed with clover seed and sown on Winter grain in the Spring, when the ground is frozen in the morning.

Hedges for Shelter.—F. M. Henrick, Washtenaw Co., Mich. Honey Locust will make a good hedge in the place desired, but as a protection from the cold north winds, Arbor Vitæ, red cedar, or some other evergreen would be preferable. With either sort for a hedge it would be better to remove the standing trees, or plant the hedge just inside of them.

Chrysanthemums from Seed.—A. Hopkins, Berkshire Co., Mass. The Pompon varieties of the Chrysanthemum as well as other kinds, may be raised from seed. It is better, however, to procure these from slips or roots, especially when particular kinds are wanted, as there is no certainty of the seed growing true to kind.

Horse Nettle (*Solanum Carolinense*).—C., Floyd Co., Ind. The Yellow berries you sent us, are not the Winter Cherry, but a fruit under the above name, and too nearly resembling the poisonous nightshade to be eatable. A description of the Winter Cherry (Physalis), with cuts, is given on page 340, Vol. XVII, which will readily enable you to identify the plant or fruit, when seen.

Perennial Winter Cherry.—Thomas Allen, Athens Co., Ohio has forwarded a specimen of a variety of Winter Cherry (*Physalis*) of which the roots were found green and full of living buds on December 6th, which indicates that it is perennial. It bears quite a resemblance to the *Physalis Viscosa;* the fruit is smaller and remains attached to the vine when ripe, while the common variety (*viscosa*) drops off as soon as ripe.

Securing second growth of Timber.—H. Jessup, Chautauque Co., N. Y. The second growth of timber will sprout most readily we believe, when forests are cut during Winter.

Hong Kong Geese, Pea Fowl, etc.—We have not at hand the particulars as to price, cost of transportation, and other items asked for by a subscriber in Rock Island Co., Ill., Dane County, Wis., and Jackson Co., Tenn. For full information address C. N. Bement, Po'keepsie, N. Y., or Richard McCormick jr., Woodhaven, Long-Island (N. Y.), or some of those who advertise poultry from time to time in the *Agriculturist.*

Antimony for Swine.—S. J. Wheeler, Hartford Co, N. C. Powdered Antimony is sometimes given to fattening swine to assist digestion and promote appetite; half an ounce mixed with the food once in ten days, is the amount prescribed by Youatt. Sulphur administered in the same manner, is generally used, and probably preferable.

Keeping Potatoes.—H. Shane, Jefferson Co., O., gives the following directions for keeping potatoes free from rot through the Winter. Let the potatoes be perfectly dry when stored. On the bottom of the bin, or barrel, place a layer of spent tan bark, say an inch thick, on which place the potatoes to the depth of a foot; then another layer of bark, then potatoes, and so on till the bin is filled, leaving the top covered with bark. This will, we judge, preserve from dampness to some extent and favor their remaining sound. It is worth a trial.

Thorley's Cattle Food.—A number of subscribers inquire about this article which is now advertised in *flaming* showbills, etc. We are investigating the subject, and will now only say that at best it is only a condiment which may sometimes be useful to diseased or debilitated animals, and not a profitable article of food as nourishment. A leading agricultural journal in England estimates that the price asked for it, is six or seven times the cost of the materials of which it is composed. We shall have more to say of it.

"Miner's Bee Hive" not Patented.—M. E. H., Columbia Co., N. Y. No patent has ever been granted to T. B. Miner, for any bee-hive, or any improvement upon a hive—at least so says a recent letter from the Commissioner of Patents now before us. Miner formerly sold "Rights" to use "Miner's Patent Bee-Hive," at $2 each. We supposed that after being once called to account, he had stopped doing so, but we still find these rights advertised on the fly leaf of a book on sale in this city. Those who have paid Miner for such "rights" on the supposition that the article was patented, must settle the matter with him.

Manufacturing Ice.—Jno. G. Storrs, Tioga Co., N. Y., living at a distance from any pond or stream supplies his ice house thus: A tin vat, 30x20 inches, and 16 inches deep, with the sides a little flaring, is filled with water and left to freeze. When the sides are frozen sufficiently solid, the vat is inverted, the block removed by pouring a little hot water over the tin, and left to become solid. The process is repeated until a supply is made, though this requires some trouble.

A Bad Failure—Explanation.

The non-appearance in this number of the promised first article on "How Things are made," demands an explanation. In October last we received a written communication from a gentleman well known as an interesting and instructive writer, and who occupies a responsible editorial position in this city. In his letter, he proposed on certain terms, which were specified, to furnish for the *Agriculturist* an extended series of illustrated articles—of the form and character announced in our November and December issues. We very cheerfully acceded to the terms without the least abatement, and accordingly made the announcement after showing a proof of it to the writer and receiving his approval. The first article for the beginning of this volume was to be furnished in November, but after several calls for it, it did not come to hand in time for last month.—sundry reasons being given, such as the unwillingness of manufacturers to have their processes made public, etc. But a note from the writer (see page 25 Jan. No.) left us still confident that the articles would be forthcoming. All we can *now* say is, that after frequently sending for the copy, we have to-day (Jan. 14th) received a note informing us that the writer "finds it impossible to meet his engagement with us and our readers." This matter has been a source of no little vexation, and we exceedingly regret the final failure, for our own credit's sake, as we have always aimed to fulfil every promise, though we trust that after the full explanation now made, we shall be excused for what is in no wise our own fault, especially as the original proposition did not come from us. We shall from this result, learn to henceforth adhere more strictly to our general rule, viz: not to announce an article until actually in type. To our readers we will promise that they shall lose nothing by the present absence of these articles, as we shall spare no effort to hereafter obtain similar information from other sources—or at least to fill our pages with what may be equally useful and interesting.

PUBLISHING EDITOR.

To Onion Growers.

Perhaps all who are cultivating onions somewhat largely, may not be aware that we published last year a very valuable little work of 31 pages on the subject—consisting of seventeen practical essays by as many different men who have had extensive experience, in various parts of the country. These essays are short, condensed, and full of useful information. They are all written independently, and in competition for a prize offered by us. As the several writers were cultivating under different circumstances, they each supplied information differing somewhat in detail, from the others, and taken altogether the instruction is very complete. Deeming these essays too valuable to be lost, and not having room for them in this journal, we published them in neat pamphlet form, and offered them at a price (21 cents including postage) which will in the end just cover the cost. We have a few hundred copies left, and will print more should they be wanted, as we have kept stereotype plates This is not a matter of pecuniary profit; we only speak thus particularly of the work, because we think it of great value to every one raising onions for sale.

$20 Premium for Plan of a Barn.

A friend authorizes us to offer $20 Premium, for the best plan of a Barn to suit his peculiar circumstances. We propose to publish an engraving of one or more of the plans offered, in the *Agriculturist.* The barn required is for a small plot, say four or five acres, near a village. It is to cost about $900 to $1200. It will stand on a line with the north side of a street. The internal arrangement is to comprise: A carriage floor for three four-wheeled vehicles, and one sleigh—accessible both from the street and rear; stalls for four horses, and two cows; grain and feed bins; root, and manure cellars; tool-room and workshop combined, with ample space for storing farm and garden implements; one or more rooms for storing garden truck of various kinds in Autumn; ample space for hay and straw above. Any other suggestions as to outside style, or internal arrangements and conveniences, will be taken into account. The plans may be addressed to C. T., care of this office, at any time prior to March 25th. If any plan is presented which is acceptable, or of sufficient interest to be published in the *Agriculturist,* we will guarantee the payment of the premium, which is offered in good faith.

Bound Volumes—Binding—Covers.

We have complete sets of volume (XVIII), bound in neat muslin covers, with gilt lettered backs—also bound sets of Vol. XVII and Vol. XVIII in one cover. We have also bound and unbound copies of volumes XVI and XVII singly, and the two bound together.

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Vols. XVI, XVII, or XVIII, *unbound*................$1.00 each.
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(*They can not go unpaid.*)

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Of Vol. XV, we have no copies, and unfortunately, no stereotype plates.

Of Vols. XII, XIII and XIV, we have some sets bound and unbound, at the same prices as named above for Vols. XVI, XVII, and XVIII.

The average **circulation** of the *Agriculturist* for six months past has been somewhat over **Fifty Thousand Copies** per month. This is believed to be a larger circulation than that of any other Agricultural or Horticultural Journal in the world. Very large accessions of new subscribers are daily received.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.

Thirty-three cents per line of *space* for each insertion, (or three lines for $1)
One whole column (145 lines) or more—$40 per column.
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☞Laborers, or those seeking employment, *one half* of the above terms.

SITUATION WANTED—By a Scotchman who has been a practical farmer from his boyhood, has had large experience in Scotland, England, and in this country; understands draining and reclaiming wild land, raising stock, &c. His wife has also been raised on a farm, and thoroughly understands butter making and in-door farming generally. They would like to take charge of a farm for a gentleman or farmer and beg to refer for character and ability to CHARLES SHIELS, Buffalo Savings Bank, Buffalo, N. Y.

Or for conditions, &c., address
G. FAIRBAIRN, Cheektowaga, Erie Co., N. Y.

GARDENER WANTED.—A competent man will be wanted during the coming season to go a few miles from this city, to work a couple of acres, devoted to cultivating vegetables, flowers, fruits, and seeds of various kinds. An enterprising, active man, having practical knowledge of his business, but not too old or too "set in his way" to earn more, will be able to obtain a good situation, and probably a permanent one. Testimonials of competency, and of upright, reliable character will be required before a final engagement is made. Address, by letter only, in the applicant's own hand, stating experience, age, family, expectations, and references,
T. F. S., care of American Agriculturist.

N B.—No one need apply who is not prepared to establish his competency in every respect. Long experience not so much a recommendation as *intelligence*, activity, and enterprise. Two or three persons of the right stamp may perhaps find employment in the advertiser's neighborhood.

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Every Baptist family should have a Baptist paper. To all such the NEW-YORK CHRONICLE commends itself as a Religious Family Journal, aiming to be always fresh and interesting; always readable; always reliable; always courteous to its co-temporaries; always deprecating useless and tiresome controversy; while always upholding a primitive and pure faith in the large spirit of true Christian charity. A paper in short embracing a wide range of reading, of current interest and intrinsic value, suited to entertain and instruct every member of the family, from the grand-parent to the child just acquiring a taste for reading, and handsomely printed on large and clear type, which does not try the eyes.

Every number contains in addition to the usual editorial matter, and a great variety of strictly religious reading, *Poetry, Literary Notices, Anecdotes, Stories for Old and Young, Hints for the Farmer and Farmer's Wife; a Complete Digest of the News—Foreign and Domestic, Religious and Secular, the Markets, etc., etc.* We also publish every other week the choicest portions of

A SERMON BY REV. C. H. SPURGEON.

Many have an idea that a denominational paper is of necessity a stupid paper. As the surest way to prove that the CHRONICLE is not of this class we will send it

FREE FOR ONE MONTH!

to all who wish to examine it with a view to subscribing. If they do not like it sufficiently well to order its continuance, we will trouble them no further. Published weekly at No. 41 Park Row. Terms, $2.00 a year in advance.

Address
P. CHURCH & CO.,
N. Y. Chronicle, New-York.

EVERY BODY should have Brower's Patent Composition, 4 Reade st., advertised in this paper, on their Boots and Shoes. It is just the article needed.

THERMOMETERS, BAROMETERS, &c., of reliable quality and various descriptions among which are those particularly suited for Horticultural purposes, which register the coldest and warmest degree of temperature during the 24 hours, in the absence of the observer. For sale by
D. EGGERT & SON, 239 Pearl st.

WILLCOX & GIBBS FAMILY
$30
SEWING MACHINE
Simple, Noiseless, and Warranted to fill all the requirements of a
Perfect Family Machine.
Manufactured and Sold, Wholesale and Retail, by
JAMES WILLCOX,
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Great
CONVENIENCE
FOR EVERY FAMILY.

SHALER'S AIR TIGHT PROVISION SAFE for preserving and retaining the flavor of all kinds of cooked provisions. Also is a complete security against all insects.

Manufactured and sold by
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Sold on Commission,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.
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Refers to the Editor American Agriculturist.
" E. R. Cooper, Cashier Market Bank, New-York.

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Consignments and orders solicited.

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By the Dozen or Hundred, sent by R. R. Circulars containing *particulars* sent *free* on application.

ALSO, a *Practical* work on Bee Culture that *all* can understand, sent *free* for one Dollar. Address
M. QUINBY, St Johnsville, Montgomery Co., N. Y.

The Leaf Bee Hive,

Invented by T. S. Underhill, and patented Dec. 13th, 1859. This improvement is for practical use, and obviates all difficulties in operating with the movable frames. For rights, &c.,
Address T. S. UNDERHILL, St. Johnsville, N. Y.

WANTED.—Experienced Book Agents are wanted in each County in the United States and Canada, to introduce *The New Illustrated Encyclopedia of all Nations*, one thousand engravings, many of them colored maps, charts, &c. For an appointment and for further information, apply immediately to HENRY BILL, Norwich, Conn.

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Ice Plows, Saws, Tongs, Grooving Bars, Chisels, and Hooks, of the most approved patterns, constantly on hand and for sale at the New-York Agricultural Warehouse and Seed Store, 191 Water-st., N. Y. R. L. ALLEN.

ALBANY TILE WORKS, Corner Clinton-avenue and Knox-st., Albany, N. Y.—The subscribers, being the most extensive manufacturers of

DRAINING TILE

in the United States, have on hand, in large or small quantities, for Land Draining. Round, Sole and Horse Shoe Tile, warranted superior to any made in this country, hard-burned, and over one foot in length.

Orders solicited.
Price list sent on application
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Send for Pamphlet.

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FOR SALE.—A Grass Farm of 200 acres, seven miles from this city, in N. J. No rocks, land level, superior for milk or hay. Price $13,000, payments to suit. Apply to the owner, A. POST, 15 Perry-st., New-York.

DAIRY AND HAY FARM FOR SALE AT A GREAT BARGAIN, NEAR NEW ALBANY, IND.—This farm is on a freestone formation, with a gentle southern declivity, contains 400 acres—120 of which are in choice timber, 310 acres under fence, with only 5 acres waste. It has good running water in the dryest seasons, three orchards, a large grapery, very large side-hill barn, holding 80 to 100 tuns hay, stabling for 45 cattle and 8 horses, cribs for 1,500 baskets corn, hay-press turning out 35 bales per day. The house is 2½ story, modern brick, tin roof, 11 large rooms besides attic, the whole well finished and in good repair. Climate salubrious, and especially favorable for cultivating grapes and peaches. Roads good, and markets convenient. The entire place, with live stock and farm implements for sale if desired, or one half the place with buildings. Price $12,500 for the entire place. $6,000 cash, and the balance on time, with easy payments. Address or call on WM. SPEAKE, Galena, Floyd Co., Ind.,
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Isabella and Catawba Grape Vines

☞MADE FROM FRUIT WOOD ALONE.☜

OF proper age for forming Vineyards, cultivated from and containing all the good qualities which the most improved cultivation for over twenty years has conferred on the Croton Point Vineyards, are offered to the public. Those who may purchase will receive such instructions for four years, as will enable them to cultivate the Grape with entire success, provided their locality is not too far north.

The past season, though the coolest and most unfavorable for grape maturing we have had in many years, the subscriber ripened his whole crop,—proving that his Isabellas and Catawbas have become perfectly acclimated. This gives him full assurance, that by improved cultivation, pruning, &c, a crop of good fruit can be obtained EVERY YEAR, in most of the Northern, all of the Middle, Western, and Southern States.

N. B. To those who take sufficient to plant six acres, as he directs, he will, when they commence bearing, furnish the owner with one of his Vinedressers, whom he has instructed in his mode of cultivation, and he will do all the labor of the vineyard, and insure the most perfect success. The only charge, a reasonable compensation for the labor. When the purchase is large, and approved paper or other security can be offered, a liberal credit on most of the purchase will be given.

Also, APPLE-QUINCE TREES, (which are sometimes called the Orange Quince,) for sale as above. R. T. U.

Also for sale at his PURE WINE AND GRAPE DEPOT, (No. 7 Clinton Hall, Astor Place, N. Y. City), Isabella and Catawba Wine in their PURITY.

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Careful systematic effort, aided by much experience, directed to growing trees of superior quality; and extensive orchards now embracing 125 acres and 13,000 trees; furnishing a means of testing and comparing varieties; enable the proprietor to furnish trees of most desirable quality, as well as most profitable varieties for Orchard Culture. Large space is given to trees in the Nursery, thus rendering them *stocky* and *strong*.

A Dwarf Pear Orchard of over 3,000 trees, part of which are in successful bearing, has furnished much experience of great value to such as may wish to engage in that interesting department of fruit culture.

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Trees packed in the best manner at moderate charge; Catalogues furnished on receipt of stamp. Also, Circular of *Yeoman's Fruit Bottles*. Terms advantageous to the buyer.
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At our Nursery we have a quantity of extra large Pear Trees of the most approved kinds, very thrifty, and all of them have been trimmed and transplanted, and therefore have splendid tops and roots. We also have a quantity of Apple, Cherry and Plum Trees, and a variety of other trees, vines, Shrubs, &c., (as above,) for sale by WICKHAM & BLOODGOOD,
Tioga, Tioga Co., Penn.

FRUIT, SHADE, AND EVERGREEN TREES.—Stock for Nurserymen, Dealers and Planters.

☞Public Institutions, Cemeteries and Parks supplied on the most liberal terms

☞Priced List and Descriptive Catalogues furnished on application. DAVID J. GRISCOM,
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NURSERYMAN WANTED—A Practical Nurseryman, having a thorough knowledge of the business, wanted by the 15th of March or 1st of April, to take the entire charge of a Nursery near Lancaster. None but an experienced hand required, to whom a liberal salary will be given. For further particulars, address WARFEL & HERR,
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ANNUAL CATALOGUE
OF KITCHEN GARDEN, AND AGRICULTURAL
SEEDS FOR 1860,

Is ready for mailing to applicants enclosing a postage stamp. It contains directions for cultivation and other useful information for amateur cultivators. J. M. THORBURN & CO.,
☞Send for it. 15 John-street, New-York.

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Sales will be made in bulk, by the ounce, pound, quart, bushel, or in papers distinctly labeled.

My Seed List contains all the old varieties, and many new kinds, all of the very best quality, and chiefly raised for me.

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FRUIT, ORNAMENTAL TREES and SHRUBS procured to order, (true to kind) from the most reliable sources, and forwarded, carefully packed, to any part of the country.

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My prices are as low as any others for the same quality of seeds.

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A T

FLUSHING, near NEW-YORK.

In inviting attention to their stock, which is this season very large and of fine quality and vigorous growth, would remind planters that the soil and climate of Long Island are noted for producing thrifty, *well-ripened* wood: it is thus, that with the proper cultivation our trees have attained their reputation for hardiness and that they so uniformly succeed when carefully attended to.

A member of our firm is now selecting from the nurseries of Europe the choice varieties of late introduction; and admirers of beautiful vegetation will find much in our grounds and houses to engage their attention.

Among the large variety we cultivate, we have only space to mention the following:

APPLE, 3 to 5 years old.
PEAR, 1 to 3 years old, both dwarf and standard.
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PLUM, APRICOT, and NECTARINE.
PEACH, 1 and 2 years,
All the above can be furnished of suitable size and form for training on walls and for pot culture.
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GRAPES, Native, embracing Concord, Delaware, Diana, Logan, Union Village and all the good new sorts.
RASPBERRY, STRAWBERRY, RHUBARB, &c., &c.

Prices of Fruit Trees, Plants and vines by the hundred and thousand at proportionately reduced rates.

TO OUR

EVERGREENS

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NORWAY SPRUCE from 1 to 10 feet, and at low rates by the quantity,
ARBOR VITÆ, American, of many sizes for hedges
" " Siberian, both small and large, and of very handsome form.
PINES, including Excelsa, Cembra, and others.
JUNIPERS in variety, and including the charming hardy Retinospora.
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All these, and many others, we offer at low rates at wholesale. Our list of

Deciduous Trees and Shrubs

embraces all that are cultivated for ornament, and of all the different sizes, whether for

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The Exotic Department

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ROSES—We cultivate in great variety, and from our mode of propagation, they are sure to thrive.

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We ask the attention of

THE TRADE

to our collection of *new* and *rare* plants of various sizes, and suited both to nursery planting and immediate sale.

We can furnish a very large quantity of small plants at lower rates, than they can be imported for. Our collectors are keeping us supplied with seeds from different quarters of the world.

We will forward the Trade List upon application.

Orders will be filled with promptness and care, and packed for distant transportation. Goods delivered free of freight-charge upon Fulton-market wharf, New-York.

Seeds. Seeds. Seeds.

I am now supplied with one of the largest and most complete assortments of GARDEN, FIELD, GRASS, FLOWER, and FRUIT SEEDS ever offered to the public. My stock has been made up with much care. A large portion are of home growth, being grown expressly for me, which I can recommend as true to name, and of the best quality. Care has been taken to have them perfectly clean.

Among my assortment may be found all the improved varieties of CORN for Garden and Field culture.

BEANS—Early Bush and Snap shorts.
Large Lima and Horticultural Pole Beans.
CABBAGE—Both early and late of American growth
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PEAS—Epps Monarch, Lord Raglan, Eugenie, Competitor, Sebastopol, Sangster No. 1, Tom Thumb and all other varieties.
POTATOES, early, and for general crop.
OATS—Choice varieties, both American and imported.
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CLOVERS—White Dutch, Lucerne, Trefoil, Large Red, Medium Red.
GRASS SEEDS.—Timothy, Hungarian, Creeping Bent, Red Top, Orchard, Blue, Fowl Meadow, Rye or Ray, Green, Sweet Vernal, Sanfoin, Fescue, Fine Mixed Lawn.
SPRING VETCHES OR TARES, Chinese Sugar Cane, Tobacco—Connecticut Seed Leaf, Grafting Wax, Bass Matting, Cotton Seed, Sunflower, Whale Oil Soap, Bird Seed, Flax, Broom Corn, &c

Catalogues furnished on application.
R. L. ALLEN, 191 Water st., New-York.

Rare and Beautiful Flowers!

We have made a selection of Seeds, from a large variety of annual flowers, of our own cultivation the past season, of those *most desirable*—those of easy culture, and of the most brilliant display; the most of which are sold by florists and seedsmen at from 10 to 25 cents per packet; but our terms are such that all may enjoy the pleasure of a beautiful flower garden. To save useless expense, we have mixed all the best varieties of each family in one packet; (as the Asters, the 12 distinct colors, &c) In our collection we have 12 packets, which embrace new and popular varieties, including Truffauts new French Pæonia Flowered Asters—12 distinct colors; Prussian Scabious, or Wedding and Mourning Bride—and large flowered varieties, various colors, from pure white to black; Convolvulus Minor—6 varieties of this beautiful gem; Prussian Morning Glory, (Ipomea,)—striped and varied colors of the most vivid hues; Coreopsis—brilliant colors—10 varieties, &c., &c. The 12 packets sent to any address, by mail, post paid, for 17 3-cent stamps (51 cents.) Address L. NORRIS.
Windsor, Ashtabula Co., Ohio.

QUEEN'S SEEDSMEN.

Peter Lawson & Son,

EDINBURGH—1 George IV Bridge.
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On account of the numerous applications which have been made to Peter Lawson & Son, to send their List of Seeds and Nursery Produce to the United States and Canada, they beg leave to inform the Trade in America that they are prepared to furnish them with

PRICE LISTS,

and to assure them that any orders they may be favored with will receive their best attention

All orders must be accompanied by CASH, or satisfactory references in England

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FLOWER SEEDS FOR THE MILLION.

We publish on the first of February a new descriptive CATALOGUE OF FLOWER SEEDS, containing over 1000 standard and beautiful varieties, as well as all the novelties of the day—with directions for cultivation.

We send by mail, post-paid, and our own selection

25	varieties	choice	Flower	Seeds for	$1 00
50	do	do	do	do	2.00
100	do	do	do	do	4.00

J. M. THORBURN & CO.,
15 John-street, New-York.

CHOICE AND RARE VEGETABLE AND FLOWER SEEDS.

Our Catalogue for 1860 is now ready—a pamphlet of seventy pages of closely printed matter—and will be forwarded to all applicants enclosing a three cent postage stamp. Address
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50 Seeds of the celebrated Hubbard Squash, post paid, for 15 cents. P. SUTTON, Ransom, Luzerne Co., Pa

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CLOVER SEED, CLOVER SEED.—I have now in store a large stock of both White Dutch and Red Clover Seeds, which I am selling low. Also Lucern, Timothy, Red Top, Orchard, Blue, Ray Grass, &c.
R. L. ALLEN, 191 Water-st., New-York.

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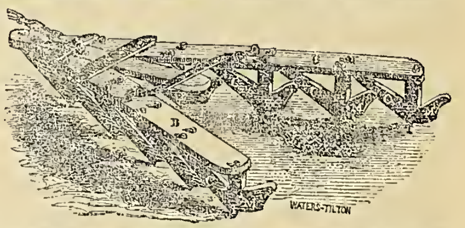

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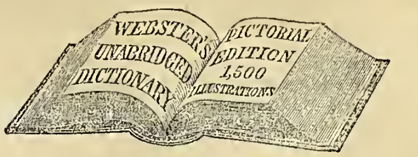
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One of Many.

We beg pardon, if need be, for inserting the letter below. It is very seldom that we occupy space with the kind commendatory notices from our cotemporaries of the press, or from our subscribers, though we have on file enough of them to fill many entire numbers of the paper. Our jealous western brother editor who recently hinted that *others* did not fulfil their promises of premiums, etc., will please "put the following in his pipe and smoke it," and if this does not soothe his disturbed nerves, let him call on us and we can privately furnish him any quantity "more of the same sort."

Bridgewater, Mass., Dec. 29, 1859.

Ed. of Agriculturist.

DEAR SIR :—Your letter of the 27th enclosing a receipted bill for a Wheeler & Wilson Sewing Machine was received last evening, in which you say that "you have made extra efforts to get the machine off at once, and that *perhaps* you will receive it by Thursday." Well, sure enough, Thursday morning's Steamboat train brought it. It has the appearance of being a perfect machine, and Mrs Keith, will have a *splendid New-Year's present.* For this *meritorious promptness* on your part, I extend my grateful thanks, and for the premium itself, my special acknowledgment.—When I had obtained 60 of the required 144 subscribers, I began to falter, but an incidental remark in a business letter from your clerk, assured me that the machine "was a prize worth seeking." I persevered, and the prize more than meets my expectations.—Long live the American Agriculturist, and its liberal hearted Proprietor. Truly Yours, L. KEITH.

Sundry Notes on Money Matters.

We willingly receive in payment of subscriptions the bills of all specie paying Banks in the States and Canadas, and would not have our subscribers put themselves to any special inconvenience to get other money than that current in their several localities. Still, as the profit on a subscription is very small, we shall feel obliged, *if when just as convenient*, persons remitting money will send those bills the nearest to *par* value here. Nearly all our payments for materials and labor must be made in current funds, and hence we are obliged to pay a discount to brokers, on nearly all subscription money received. The rate of discount varies a little from time to time, but the following are about the average sums we pay on each hundred dollars received in bills.

Nova Scotia Banks (British Province)............	$10.00
New Brunswick, (British Province)..............	5.00
Illinois, Wisconsin, Iowa, (now $3½) usually	3.00
Tennessee, Missouri (just now $3) usually $1 to..	2.00
Alabama, Indiana, (except State Bank)...........	1.50
North Carolina, Georgia, (except Savannah and Augusta)	1.25
Virginia, Ohio, Kentucky, Indiana State Bank....	1.00
Pennsylvania (interior and Western), Maryland (except Baltimore), Louisiana.................	75
South Carolina. Savannah and Augusta, Geo, and Honesdale, Pa..	50
Delaware, Baltimore, Md., Eastern Pennsylvania, New Jersey, and New York State	30
New England....................................	10
New York City, Hudson River, 5's in Eastern N. J., Easton B'k, Pa., Pahquioque, Pequonnock, Ct., etc.	*Par.*

Checks on banks out of the city cost us 25 cents and upward for *each*—no matter how small the amount.

Drafts or checks on New York city banks are equivalent to gold. We always prefer these on all sums of $10 and upward, for if payable to our order, they can not be lost or stolen from the mails. On these we are always willing to allow the cost of exchange, if not exceeding *one per cent*, and half the exchange if two per cent or more.

Postage Stamps are convenient for remitting small sums; they should always have a piece of paper between the gummed sides, when mailed, to prevent their adhering together. *Ten cent* stamps are not so easily sold as 3-cent stamps, but can be disposed of in time. The 3-cent stamps are most desirable.

Gold Coins should always be securely fastened in a card, or between two thick pieces of paper, by pasting or stitching, before putting them into a letter. Letters enclosing money should always be well fastened, clear to the corners, to prevent money from slipping out, and also to prevent their being opened.

Always be sure that you have actually put the money in before sending, and that the outside direction is right, and also that the *name*, *Post Office*, and *State* be given inside. Very many letters come to us with one or more of these items omitted.

Notes on Postage.

—o—

No Postmaster has any legal right to charge over SIX CENTS a year postage on the *American Agriculturist.* The paper is manufactured expressly with reference to having each number weigh a trifle less than *three ounces*, when weighed dry and without the wrapper, as the law directs: and the law is explicit that periodicals weighing not over three ounces, shall be charged one-cent each, if sent singly, and only *half* this rate when the postage is paid quarterly in advance at the office where received.

Can at any time be increased, by remitting for each addition the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will of course be sent to added names.

Send on for Your Seeds.

We have now got our seeds for this year's Distribution fully arranged, and have been sending off from 5.000 to 10,000 parcels a day, since January 12th. The present applications come in nearly as fast as they can be filled, but we hope to overtake the demand on or before the middle of February, so as to respond to after applications within two or three days from their reception. **N. B.**—The parcels to go by Express can not well be got ready before about the close of February.

All our readers who anticipate sending for seeds, will please do so at as early a day as possible. We provided an ample supply of all kinds, so far as we could form an estimate in advance, but it happens that at least ten thousand persons have taken a fancy to particular kinds of seed, so the probability is that some varieties will soon run out. Those sending hereafter, will do well to put a second list on the *lower* left hand corner of the envelopes, to be selected from, in case the upper list can not all be furnished. Three kinds, Nos. 81, 112, and 125, are already nearly out.

For 112 we put down ½ of 3-cent stamp in the list, not expecting to get *clean seed*, as we succeeded in doing. This and a few other parcels *appear* small. Those who think so, will please *count* the seeds, if they have time and patience enough. Some of these choice seeds cost us $40 per lb.

A Request.—May we ask our friends when sending for seeds to do us the favor to cast about, and see if they can not at the same time send on the subscription of a neighbor or friend. Favors of this kind will be reciprocated in any way practicable by sending any extra parcels of seed desired, or otherwise.

American Agriculturist.

(ISSUED IN BOTH ENGLISH AND GERMAN.)

A THOROUGH GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; IN-DOOR and OUT DOOR work around the DWELLING; care of DOMESTIC ANIMALS &c &c.

☞ The matter of each number will be prepared mainly with reference to the month of issue and the paper will be promptly and regularly mailed at least one day before the beginning of the month.

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All business and other communications should be addressed to the Editor and Proprietor,

ORANGE JUDD.
No 189 Water st, New-York.

AMERICAN AGRICULTURIST,

ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN.—WASHINGTON.

ORANGE JUDD, A. M., EDITOR AND PROPRIETOR.

ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE. SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 3. NEW-YORK, MARCH, 1860. [NEW SERIES—No. 158.

☞**Office at 189 Water-st.,** (Near Fulton-st.)
☞**Contents, Terms, &c., on pages 91-96.**

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March.

> "As yet the trembling year is unconfirmed,
> And Winter oft at eve resumes the breeze,
> Chills the pale morn, and bids his driving sleets
> Deform the day delightless; so that scarce
> The bittern knows his time, with bill ingulfed,
> To shake the sounding marsh; or from the shore
> The plovers when to scatter o'er the heath,
> And sing their wild notes to the listening waste."
> THOMPSON.

It puzzles many to know, what this sour, crusty month was made for. It is neither Summer nor Winter, but fitful, cross-grained and turbulent, like a spoiled child. Now we have a bright sunny day, when the breeze comes sighing in softest cadence from the sweet South, and it seems as if the golden gates of Spring were unlocked, and the grand choral procession of birds and flowers was about to enter. To-morrow, the wind howls frightfully, black clouds drive through the heavens, the air is filled with mingled sleet and hail, and the chilling blast strikes into the bones. The ground is covered with snow and hail, the ponds are sheeted with ice, and from the eaves of barn and dwelling, hang stalactitic crystals in long glittering rows. But as the sun comes up, and we stand looking at them with shivering glances, the whole platoon comes down with a crash, followed by an avalanche of snow from the laden roofs. There is a relenting of the reign of the frost king, the days grow longer, and the power of the sun increases, giving promise of the good time coming.

The farmer could poorly afford to part with March, rough and uncomfortable as it is. The alternate freezings and thawings, if he have made preparations to receive their full benefits, will prove an important advantage to his fields. They work mechanical changes in the texture of the soil, and prepare the way for chemical changes, as they break down the indurated lumps, and bring the different ingredients into closer contact. More available plant food is probably manufactured in this month, from this cause, than in all the Winter months Almost every twenty-four hours, the surface of the earth is frozen and thawed again, and every change adds a little to the store of plant food, on which the vegetation of the coming Summer may rely for its sustenance. The rough winds, too, are friendly agencies in drying up the superabundant moisture of the earth. This leaves small fissures in the soil, into which the seeds of grasses sink, where they soon vegetate. The worst features of the month, like afflictions, are friends in disguise.

There are many persons very much like March, always blustering and grumbling. They complain of hard times, and nothing seems to go right with them. The tilling of the soil is the hardest kind of work, and rewarded with the fewest comforts. The farmer can not afford to have upon his own table those luxuries which he provides for others. If he fat a calf, or lamb, the butcher gets them both. If he raise chickens and eggs, the merchant wants them all to square up his account. If he rear a flock of turkeys and geese, he can only afford one at the annual festival of Thanksgiving. If he have a patch of early garden vegetables, they are all wanted in the neighboring village, at such prices that he can not keep them. He has to live upon old stores, while mechanics and merchants are luxuriating upon new potatoes in June, at two dollars a bushel. They can dress in the finest of broadcloth, while he can poorly afford a second-rate article, and has to keep the best hat and coat on hand, till they are thrice out of fashion. He has a hard time of it, and thinks the evils of life greatly overbalance its joys. Now, we are disposed to put on a few March airs, just for once, and read the grumblers a lecture. Mark, this is only to those deserving it, not a large class, and only those whom the garment fits, will put it on.

We guess, if you find hard times, when every product you raise sells so high that you can not afford to keep it, there must be a screw loose somewhere in your economy. You are extravagant. We see you are indignant at the charge, and point to your frugal fare, and your threadbare coat, in conclusive attestation of the strict parsimony of your habits. But let us investigate this matter. There is your house, a fine two-story building, nicely painted inside and out, with rooms enough in it to accommodate a family three times as numerous as yours. There is the parlor, perhaps a large double room with folding doors, and not used on an average three times a year. Then look at the fixings and furniture in it, kept mainly for show, and yet never shown to any body that respects you a tittle more for its embellishments. There are carpets costing a hundred dollars, elegant mahogany chairs, bureaus, sofas, etc., to keep them company. They are all too good for use, too sacred for the children to play with. It is too cold for them in there during Winter, and in Summer they might soil the carpet, or break a mirror.

Then, in the garret, or upper part of the house, you have, perhaps, a great deal of unfurnished room, dedicated to old newspapers, dried herbs, strings of pepper-pods, three-legged chairs, and superannuated cradles. This receptacle of trumpery was probably put on to keep up appearances, and to have a house as big as your neighbor's. Now, you have in these unused, and, for your purpose, useless things, perhaps a thousand or fifteen hundred dollars. It is so much dead capital locked up. You get no interest on it, and it yields you no profit, except a slight gratification to your pride, and that of your family.

Nor is this all of the extravagance. Your wife has a great deal of anxiety and care to keep so much extra room in order, and to put all the spotless furniture safely through the perils of the semi-annual cleaning. What sweepings and dustings, and fussings, and fixings, with articles kept mainly for show! Now, these things may be all well enough for a man of fortune, who can command as many housekeepers and servants as he wishes, to keep up a fashionable style of living. But they are extravagance in a plain farmer, who feels that he can hardly afford a hired man in his fields, or a dairy-maid in his house. This capital, put into a large house and its adornments, if it were invested in his business, labor, stock, muck, barn cellars, or better tools, would pay him a large interest. It would apply grease to the wheels, where they now are squeaking and wailing, like March winds.

Then, to keep up appearances out doors as well as in, you must sell the old wagon, and get a new carriage at an expense of two hundred dollars, and then, to match the carriage, there must be a fine harness, and finer horses, the whole establishment costing five or six hundred dollars. There was a good deal of wear in the old wagon, and it would have lasted a dozen years longer with careful usage, and taken your family to church with as much edification, and probably more, than the present varnished vehicle. We have nothing to say against a fine equipage, but it should belong to a man who eats turkey more than once a year, and whose parlor is inhabited. Possibly this and other extravagances are the occasion of your hard times, and of the discontent that pervades your life. There is no rapid fortune to be made in farming, but with industry and economy it yields a sure and ample reward to all. Extravagance, or living beyond one's means, is ruin in any business.

* * *

It is bad policy to allow cattle to roam over grass lands in Spring. They undoubtedly enjoy the freedom, and relish the first tender bits of the fresh grass, and it is a pleasant sight to see them in the fields again; but they do more harm to the grass than they get of good. In meadows that have become somewhat run out, more seed of herds-grass and clover should be sown, the surface well harrowed both ways, and afterwards rolled. This treatment sometimes doubles the crop. Two tuns per acre cost little more than one,

Calendar of Operations for March, 1860.

[We note down sundry kinds of work to be done during the month, not so much to afford instruction to practical men, as to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45° ; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

This table will be much fuller, and more important during the planting season when there is a greater variety of work to be done.

Explanations.—*f* indicates the *first* ; *m* the *middle* ; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated : thus, work marked *fm*. indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

March is here, with its rude winds, like a busy blusterer clearing the way for the advancing season. Unpleasant as the sweeping blasts are, they perform important service, rapidly freeing the surface of the earth from moisture and enabling the awakening vegetation to push its way up to light. Already at the South the fields are green and the gardens planted. Cultivators in this latitude often wish for the advantages of such an early season. Though we can not control the sunshine, we may do much to make it more effective. A properly sheltered and thoroughly drained farm may be worked many days earlier than one where the winds are unchecked, and the soil saturated with moisture, with no way of escape but by surface evaporation. Much, too, may be gained by system and full preparation. Let the season's work be fully planned, all necessary implements prepared and seed procured now, that there be no hindrance when the time arrives for active operations.

Buildings need careful inspection to secure weak timbers, loose boards, and open joints from the driving winds of March.

Cattle—This is perhaps the worst month of the season for animals. Keep up their appetite by change of food, alternating cut coarse fodder with grain and roots. Look well to breeding cows; give them separate roomy stalls at night. Working cattle should be gradually introduced to heavy work after their long inactivity. Keep them well carded and in good trim.

Cellars—Open for thorough ventilation as early as possible. Remove all refuse and decaying vegetables. Sort potatoes, apples, etc. Preserve beets, carrots, cabbages, etc., for seed. Whitewash the walls and posts at an early day.

Clover—Sow, m, l, upon light snow, or when the ground is well opened by a morning frost. Use plenty of seed.

Draining—Lay tile drain as early as frost will allow. If these can not be procured, subsoil wet lands intended for grain. Clear out open ditches, adding the muck to the manure heap.

Fences—Put in repair, ff, or as soon as frost is out of the ground. See particularly to line fences. Plant hedges, m, l, in localities not too cold. Prepare posts, rails and gates in stormy weather.

Forests—Devote waste rocky spots to locust, black walnut, maple or other quick growing trees.

Grain—Examine bins to exclude vermin. Keep from molding. Shell and market corn. Select or procure seed if neglected until now.

Hedge rows near fences, and scrubby bushes in meadows and pastures, or by the road side, should be rooted out. Tidiness adds to the market value of the farm, and improves the taste and pleasure of the occupants.

Hogs—Breeding sows need attention. Give a little animal food and charcoal or cinders occasionally. Give liquor enough to intoxicate to those inclined to destroy their young. Litter the pens freely to make manure. Keep all tidy.

Horses—Commence working gradually and increase feed with the labor. Give carrots with oats. Avoid exposure to winds when heated

Ice-House—Complete filling if not done, and keep properly secured. Examine drainage and ventilation.

Manures—Work over compost heaps. Cart that already prepared to the fields; and cover the heaps with muck or soil and plaster if accessible. Remove contents of privies before warm weather makes it more offensive. Cleanse hog pens, hen roosts, kitchen drains, etc., to increase the stock of fertilizers.

Meadows—Remove rocks, roots, brush, etc., as the weather permits. Keep drains open. Allow no stock to graze upon or trample them up—or down.

Plowing done too early is a detriment. Wait until the ground will not pack. Deepen the soil gradually, one to two inches a year. Cross plow lightly, lands deeply turned last Fall. Subsoil when practicable.

Potatoes—Secure early, for home use at least, as described on page 73. Secure seed of best varieties. Try new kinds sparingly.

Poultry—Give chopped meat and green food with grain. Supply with water, gravel and ashes, or chip dirt. Remove accumulations of droppings. Save eggs for setting, m, l. For earliest chickens set, l. Allow one male to ten or twelve hens. Read article on Turkey raising, page 76.

Seed—Secure full supply from reliable sources. Change occasionally for that raised in a distant locality. Test small parcels of corn and other grain before using largely.

Sheep—Keep breeding ewes by themselves, where they may be comfortable and quiet. Allow them roots and grain. Watch for early lambs. Read article on Protection from Dogs, page 75.

Sugar Maples—Tap, f, to m. Use shallow evaporators. Keep all sufficiently clean to prevent the necessity for clarifying.

Sorghum—It may be well to plan for trying a small plot this year for soiling, for fodder, or if practicable for making syrup. Secure seed early.

Tools—Provide all necessary, repair and repaint those needing it. *Return borrowed tools*; your neighbor may be looking his up, and not know where they are.

Wood—Have enough for the year cut and piled to season now—under cover if practicable.

Orchard and Nursery.

In the Orchard much may be done to promote thrift, protect from insects, and replace decayed trees. Proper attention year by year will make this department more remunerative than the grain field.

The nurseryman will find plenty of business in attending to orders for Spring planting, and in providing for increase of stock. The earliest favorable time for planting should be improved, both to forward the work and for the benefit of the trees.

Apple Trees—Scrape the trunks and larger limbs clean. Remove small suckers—pruning is better done in August. Replace poor fruit with select varieties by grafting. Plant standards in favorable locations by the roadside, along lanes, etc.

Cherries, Peaches and Plums—Set a full supply for home use near the house. Plant Cherries as early as frost permits. Straighten trees bent down by prevailing winds.

Cions may be cut, ff, if not done before. Label each sort distinctly. Keep those already provided where they will preserve their natural moisture.

Drain with tiles all heavy soils. Fruit trees will not thrive with wet feet.

Evergreen Trees—Do not remove unless absolutely necessary. May is much more favorable. If it be done, take up plenty of earth with them and keep the roots from exposure to sunshine or wind.

Grafting—Begin, ll, with cherry and trees that start earliest. Next month is usually best for apples, pears and most fruits. Read article on page 82.

Insects—Examine all trees purchased or sent out from the nursery for scale insects, and reject them ; they can not thrive until freed. Apply alkaline wash. See "Wash for fruit Trees," page 81.

Manures—Top dress orchards liberally with compost containing plenty of leaf mold. Lime and ashes are good.

Mice-girdled Trees or those injured by rabbits may sometimes be saved by coating with grafting cement. Shellac dissolved in alcohol is also recommended. For preventive see page 82.

Pear Trees—Choose standards rather than dwarfs for main supply. A few of the latter will do for the garden. Plant, m, l. In grafting on wild stocks, be particular to procure seedlings, and not suckers thrown up from the roots of old trees. Secure full supply of young stocks early. Read article, page 82.

Plums—Plant, ll. Examine branches for indications of "black knot" and remove with the knife, paring smoothly.

Pruning—Leave it until late Summer, except to remove small shoots or decaying branches..

Seeds or Pits—Plant, ff, m, apple, pear, quince, cherry, peach, plum, walnut and chestnut, which were stored for use last Fall. Sow, m, l, seeds of evergreen and of deciduous trees, as locust, maple, birch, etc.

Stocks budded last year—Remove the natural growth, two or three inches above where the bud has taken.

Transplant trees with as much earth as possible attached. Keep the roots shaded from the sun ; remove all that are injured paring the ends smooth.

Kitchen and Fruit Garden.

In this latitude, properly drained, deeply worked soils will be ready for some of the earlier vegetables this month, most varieties however, must wait until the air is more genial ; except with the aid of the hot-bed. Some of the most successful gardeners wait until their impatient neighbors have finished before planting a seed, and in the end find their account in so doing. The situation, exposure, etc., will determine the best season for a commencement. Meantime let an ample stock of manure, seeds, implements, etc., be prepared, and the garden fully planned.

Artichokes—Top dress old beds with stable manure and plant new, m, ll.

Asparagus—Remove covering and fork in manure, ll, as soon as danger from frost is past. Make new beds from seed or roots, ll. See article page 83.

Blackberries—A patch of New-Rochelle or other cultivated variety near the house is preferable to dependence on the "bush lots" at a distance. The flavor is also superior. Plant roots, m, l.

Borecole and Kale—Sow, ll, where the ground will permit.

Cabbage and Cauliflowers—Sow, ff, m, in hot-beds. Give constant heat and little air till well started, then harden gradually. Sow in open ground, ll. Set stumps and heads for seed, ll.

Caraway—Sow seed, ll.

Celery—Sow in hot-beds, m, l.

Cold Frames—Give plenty of air as the temperature increases, removing the sashes daily except in freezing weather. Sow cabbages, lettuce, radishes, etc., to succeed plants ready for transplanting.

Cress—Sow, ll, in open ground.

Currants and Gooseberries—Make cuttings, ff, if not already done. Secure improved varieties. Put in cuttings and rooted plants, m, ll Read artice on Gooseberries page 83.

Drain, f, m, clay, or other moist lands. Examine drains already laid and keep water courses clear.

Egg Plants—Sow in hot-beds, ll.

Fences and Gates—Put in thorough repair. Protect the garden from poultry with pickets or lines of twine stretched around the inclosure a few inches above the fence.

Fruit Trees—Dwarf pears, peaches, cherries, etc., may be planted along borders, ll.

Grapes—Plant roots or cuttings, ll. Uncover protected vines when mild weather is established. Fasten properly to trellises ; lead wire is best for this purpose. Fork in a good dressing of chip manure and bone dust. Be shy of flaming descriptions of new varieties. See "Grape Mania" on page 83.

Herbs—Divide and reset roots, m, ll, sowing seed at the same time.

Hops—Plant roots, ll, providing poles for, ff, m.

Horseradish—Divide and replant m, l.

Hot beds—Make, ff, m. Where glass sashes are not easily obtained, thin muslin oiled and stretched on frames is a good substitute. Like beds for sleeping they should be in every family. Give air on mild days to those previously planted.

Leeks—Sow, ll.

Lettuce—Sow, f, m, in hot-beds, and, ll, in open ground. Fill vacancies in cold frames, ll.

Manures should be thoroughly intermingled with the soil. Composting with muck and lime renders them valuable for this. Bone sawings are excellent plant food and easily applied near the plants where they are most wanted. Be liberal in feeding plants if you would be fed by them.

Mustard—Sow, m, l.

Onions—Sow on well prepared ground, ll.

Parsley—Sow, ll.

Parsneps—Dig for market or for home use. Leave sufficient for seed, or set out, ll.

Peas—Sow on warm borders, ll. Place the seed a few minutes in water raised to about 190° to destroy the weevil. Prepare brush, ff, m.

Plow, subsoil, and trench, ll, if sufficiently dry.

Potatoes—Plant early varieties for first supply, ll. They may be hastened in growth as described on page 73.

Radishes—Sow at intervals in hot-beds, ff, m, l. and ll, in the open ground.

Raspberries—Uncover buried canes, ll, if sufficiently warm. Stake up, and cut back to four or five feet high.

Rhubarb—For earliest use force as described on page 83. Uncover protected roots, ll, and fork in plenty of manure. Set out new plants, l.

Seeds—Secure a full supply. Test all kinds before purchasing largely. Those sown this month may be forwarded by enclosing in a cloth, covering lightly until sprouted and then sowing.

Spinach—Uncover Fall plants and sow seed, ll. Thin out for use.

Strawberries—Rake off the Winter covering, ll, and top-dress with fine, well rotted manure, hoeing it in.

Sweet Potatoes—Plant in hot-beds, m, l, to obtain sets for planting out.

Tools—Repair old and procure new and improved that have been tested.

Tomatoes—Sow in hot-beds or in pots in the house, f, m, and in open ground, ll.

Trellises and Arbors—Put in good repair, and erect new where needed

Trench at least part of the garden plot, ll, if the soil be warm and dry.

Turnips—Sow, ll, in open grounds for early use. If to be forced, sow in hot-beds, m, l.

Winter Cherries (*Physalis*)—Sow, f, m, in hot-beds, and, ll, in open ground.

Flower Garden and Lawn.

Before the close of this month a few of the hardiest flowers, as snow drops, crocuses and pansies, may be expected to herald the bloom of Spring. But except where forcing glasses are used, it will require some time yet, and much pains, to bring out the full attractions of the flower garden. Too much haste in sowing flower seeds causes frequent disappointment, and unless in a remarkably early season, it is better to confine the labors to preparing walks, removing rubbish, trenching for borders and making all things ready.

Annuals—The hardier sorts as larkspur, candytuft, mignonette, portulaeas, petunias, etc., may be sown in warm borders, ll, if the weather be mild.

Biennial and Perennial Roots—Divide and reset, ll.

Box and Grass Edgings—Plant and trim, ll. Fill defective spots.

Bulbs—Plant, ff, as soon as the ground can be worked.

Carnations, Pinks and Daisies—Harden those in frames, or pits, by airing freely.

Draining heavy soils is essential to free growth of flowers as well as of fruit.

Gravel Walks—Rake off, dress liberally with salt to keep out grass. Replenish old with coarse gravel.

Glass covered boxes, open at the bottom, set over Pansies, Violets, Daisies, etc., will bring them into early bloom. The glass should be movable to admit air.

Hedges—Plant Altheas, Buckthorn, or Privet, for screens, ll, if the soil be in working order.

Honeysuckles and other Vines—Prune, m, l, and arrange upon lattice work or trellises, ll. Plant cuttings or roots at the same time.

Hot-Beds—Make, ff, for propagating cuttings and sowing annuals for early flowering.

Labels, Stakes, Dahlia poles, etc.—Provide what are needed, ff, m.

Lawn—Clear off decayed leaves, twigs, and all rubbish. An occasional thorough sweeping with a birch broom will level worm casts. Top dress with fine manure, as composted muck, bone-dust, guano, etc. To preserve a smooth surface, remove coarse thick tufts, reseed bare spots and roll with a heavy roller.

Ornamental Trees—Remove covering from protected evergreens when sufficiently mild. Pare smoothly the ends of branches broken. Thin out those crowding each other; plant deciduous trees, ll.

Plow and grade new grounds. Plow soil for planting, ll.

Pruning trees and shrubs is not advisable now, but where shrubbery is out of shape straggling branches may be taken off. With Rhododendrons, Lilacs, Pyrus Japonica, Almonds and other flowering shrubs, cut out only the twigs that show no bloom buds, leaving others till after flowering. Roses may be properly trimmed for training to trellises. Suckers from worked stocks should be removed at once.

Roses—Plant cuttings and roots, ll.

Green-Houses.

Fire heat will be wanted only in cold days. Constant attention will be needed to guard against sudden changes; nearly even temperature, not rising above 50° should be maintained. Give air every favorable opportunity, to strengthen the growth, and harden for out door exposure.

Bedding Plants—Harden off a good stock of Verbenas, petunias, daisies, etc., for out door planting.

Cleanliness in this department is of the first importance. Decaying leaves and branches, moss, weeds, etc., should all be removed. Allow no dust. Wash and syringe the foliage frequently.

Insects—Watch against them continually. Prevention is easier than cure.

Oranges, Lemons, Oleanders, Myrtles, etc.—Examine, cutting to a good shaped head, and clear tubs from weeds, moss, etc. Repot and dress those requiring more room and a richer soil.

Pelargoniums—Remove decaying and moldy leaves or branches. Water more freely and give plenty of air as they come into bloom.

Seeds—Sow, m, l, for out door planting.

Water—Give moderate supplies to succulents, and more frequent applications to woody plants in fair growth.

Hot-Houses and Conservatories.

The amount of heat required here this month will depend on the temperature without and the state of the plants within, some varieties requiring higher temperature than others. It is not safe however, to allow the heat to sink below 50°. Air may be sparingly admitted when the mercury stands at 70° out of doors. All sudden chills must be guarded against; they are much more injurious than gradual changes.

Abutilons—Water moderately; trim to well formed head.

Acacias in bloom require plenty of air and little water.

Annuals—Remove to pots those sown last month, and sow for increased stock.

Azalias—Cut back straggling shoots to keep in form.

Bulbs—Keep up succession of bloom with plants from the Green-House. Give fresh water twice a week. Those done blooming may be set away to dry off.

Calceolarias—Repot those needing it, and water freely.

Camellias—Give medium heat and plenty of water. Avoid wetting the blooms, which would cause early decay. Inarch young plants, m, l.

Chrysanthemums—Increase by cuttings and layers.

Cinerarias—Shift pot-bound plants, keeping down green fly with fumigations.

Cuttings of many plants, both succulent and woody, may be put in to good advantage. Keep moderately moist and cover the more delicate with hand glasses.

Flowering Plants—Keep up a succession by potting and bringing to heat and light, as great a variety as possible. As they pass out of bloom, lay away, head back, and otherwise regulate as necessary.

Fuchsias—Bring from Green-House to forward the flowering season. Train to a neat round or pyramidal form. Repot young plants.

Hydrangeas, Pinks, Carnations and Daisies—Bring in to force for early bloom, m, l.

Grapes—Keep the shoots tied in place as they push out. When the flowers are well formed, cut back to one eye above the fruit. Give plenty of air, and syringe freely. Fruit already swelled should be thinned, removing all imperfect berries, and enough others to make the bunches of good healthy size.

Heaths—Shift to larger pots as necessary.

Insects—Destroy by tobacco fumes.

Lantanas—Repot, f, m, plants for blooming early.

Layer woody plants for an increase of stock.

Musas—Water freely when in a growing state. Change those needing it to tubs of fruiting size.

Peach, Fig, Orange, Lemon, and other trees in pots, now require an even temperature, abundance of air and light. Water freely and keep down insects.

Pelargoniums—Place in a light airy situation, watering rather sparingly.

Roses—Shift established cuttings and those intended for early flowering, to large pots. Harden off a portion for out-door planting, by putting in frames, outside.

Seeds—Sow abundance of annual exotics and natives.

Syringe the walls and plants, and sprinkle the floors each morning to maintain a moist atmosphere.

Water—Give moderately, especially to woody plants. An excess is more to be feared than too little. See that the drainage be perfect.

Apiary in March.

BY M. QUINBY.

If the air passages of the hive are open, the bees need not be disturbed until the frost about them is gone, when dead bees, wax, chips, and other filth should be removed. It can be done more thoroughly by using an extra bottom board. Raise the hive gently, and put under it the clean board, then clean off the other, and change with the next hive and so on through the whole. Each hive must occupy its old position. Clusters of dead bees between the combs should now be removed before they mold; any combs already moldy should be cut off. As soon as there is a day sufficiently warm for the bees to fly freely, take a look some morning while they are quiet, to ascertain the strength of each colony. If weak, close the entrance so as to allow only one bee to pass at a time, to prevent robberies. Such as are destitute of honey, must be fed—honey is the best material—a box of sealed honey set on the hive is the most convenient method of doing it—sugar made into syrup will do in the absence of honey. Sticks of sugar candy thrust in between the combs are said to be very valuable....If any stock has lost its queen during winter—which about one in fifty will do—the bees will be very likely to desert on the first good day for flying, and join some other, usually, without any quarreling. The hive left should be immediately cared for, or the bees will carry off the honey. Should the combs in this be bright and new, they are of more value as they are, than to be removed. They may be kept for a new swarm, but they must be smoked once or twice with brimstone, to kill the moth worms as they hatch, otherwise they would injure instead of benefiting any swarm. A colony having diseased brood, or combs which are very old and black, may be advantageously transferred to a hive thus depopulated. The operation is best performed in a warm room, and it is better if there is only one window. The hive to receive the bees should not be frosty, or even very cold. Begin by smoking the bees a little, and inverting the hive, set over it the one to receive the swarm, stopping all passages, strike the lower hive rapidly, but not very hard, fifteen or twenty minutes, when the upper one may be set aside, and an empty one substituted to receive the remainder of the bees by the same process. Should any refuse to leave by this means—which they will sometimes do at this season—cut out the combs, and with the feather end of a quill, brush them either directly on the combs of the other hive, or by the bottom of it, when right side up—when they will enter. Such bees as have gathered on the window, with those driven into the second hive, may also be swept and shaken down by the entrance, and the hive closed up for a few hours. But should the day be warm enough, put it directly on its stand without closing it, and allow those that gathered on the window to return of themselves after being brushed out. The only danger of stings during the operation, is at the commencement, and not then if smoke is judiciously used. This should always be done as early in the season as possible, otherwise many of the advantages are lost. These directions apply also to transferring into light hives that were set away in the fall for this purpose....The advantage of feeding rye meal was further indicated last season, especially in sections where there are not many early pollen bearing flowers. One correspondent fed rye and buckwheat meal mixed, and got a swarm in May, which had not occurred before in ten years, it was also several weeks in advance of his neighbors. This is worthy of further experiment, and comparing the results with other seasons. The best way that I have found, is to make a sort of floor a few feet square, and nail around the edge some strips three or four inches wide, so that the bees will not waste it off the edges. A few quarts of meal at a time spread on this, is readily taken by the bees. Unbolted flour appears to be the best, flour mixed with saw dust will do. If flour alone is given, it will adhere to their bodies and they seem to lose time in removing it....Bees that are in the house may be put out the first fine days, when the air is warm. Set out a few at a time, on stands as far apart as possible, when these have mostly been out and returned, set others between. If the weather is warm enough to make them uneasy in the room, before it is right out of doors, a bushel or two of snow, or pounded ice, will cool them for a time. When opening the door to carry them out, should they be anxious to leave, and be lost by creeping out, introduce some tobacco smoke into the room to quiet them. If severe weather occurs after they are out, the weaker ones may be returned to the house. Close some of the air passages which are not needed now, and confine the animal heat to assist in developing the brood. Clear sunshine with a newly fallen snow is fatal to many bees; they should be confined to the hive, either by shading, or closing the entrance for a few hours at such time. Keep all refuse honey, or that in any hive unprotected by a colony, out of reach of the bees, it is quite sure to induce pillaging habits.

Furnishing Trees, Vines, &c.

In response to H. C. Parker, of Hillsboro Co., N. H., (for whose very kind expressions we return heartfelt thanks,) and to answer many others, we desire to say, that we grow no trees, plants or seeds *to sell*—all our surplus goes into the free distribution. When specially desired, we can hand over to some reliable dealer any remittance entrusted to us, but, as a general thing we prefer such orders to go direct to the dealers themselves This is not from any unwillingness to oblige our readers, but from a desire to be as far as possible disconnected with any outside business transactions, where there might be even the appearance of self-interest. We have seen too much of this puffing of manures, implements, etc., in professedly agricultural journals, *because* the conductors of them were directly or indirectly interested in commission or profits upon the articles recommended.

Dr. Grant's Graperies not Destroyed.

A report has been extensively circulated that the celebrated Grape Houses at Iona were blown down by the gale of wind on Feb. 10, involving a loss of from $20,000 to $40,000, and the destruction of the large collection of Delaware and other grapes. We are happy to announce on the best testimony, from Dr. Grant's own mouth, that the report was groundless. The total damage amounted to just 37½ cents! by the breaking of two panes of glass, (not to mention two chickens killed by a weasel on the same night.) The report was telegraphed to the daily papers by one of the newsmongers of the press, who was alarmed by the unroofing of a stone house near by, and supposed there was a smash up of things generally. Dr. Grant was at the Convention at New-Haven at the time, and, as may well be supposed, suffered not a little anxiety, until his return home with plans already half matured for at once re-erecting the fallen graperies.

Scientific and Practical Talks about Manures....III.

(Continued from page 40.)

Let us clearly understand the leading points of the two previous chapters. We have assumed: (*a*)—That nearly all the food of all kinds of plants, is derived from the air; the food floats about in a form so transparent, or in particles so minute, as not to be seen by the eye. (*b*)—That while some of this plant food is absorbed through the leaves, other portions are taken in through the roots—a part being washed down to the roots by rains, and a part being carried there by the air which circulates in the porous surface soil. (*c*)—That to increase the growth of plants, we add to the ordinary food, extra supplies in the form of manures. (*d*)—That owing to the constant change of air, it is impracticable to increase the supply of food around the leaves, in open field culture, and therefore food can only be supplied through the roots, by means of manures placed in the soil around the roots. (*e*)—That all plants, of whatever kind, are chiefly composed of four elementary substances, viz: *Oxygen*, *Hydrogen*, *Nitrogen*, *Carbon**—there being, besides these, a small amount of mineral matter, which is left in the form of ashes when the plants are burned. Sometimes, also, a little sulphur, or other matter, is found in plants, but not enough to be taken into account here. (*f*)—It was assumed in the first place, that *Oxygen* and *Hydrogen*, being the elements of water, are probably supplied in sufficient abundance for all the wants of plants, by the moisture in the air and in the soil; second, that *carbon* (charcoal) which is so abundant in all plants, is probably furnished in abundance by the carbonic acid always found in the air to which it is supplied in abundance by the decaying of plants It was suggested that perhaps additional useful supplies of carbon may be yielded by the decaying of plants in, or on the soil.

Three of the four chief elements of the plant, being thus provided for, we now come (*g*) to discuss the fourth and last organic element in plant food, viz.: *nitrogen*. This is, probably, the most important one to be considered. As previously stated, air is made up of about 21 parts (by weight) of oxygen and 79 parts of nitrogen. But nitrogen itself is not freely absorbed by water, and hence the supply of this element carried to the roots of plants, is not large. Further, there are reasons for believing that nitrogen is not directly appropriated by plants, in its simple state. Nitrogen, however, combines with hydrogen under favorable circumstances, and forms a substance called *ammonia*, familiarly known as "spirits of hartshorn." (See the last explanation in previous note.) This compound, (ammonia) is very soluble in water, but it is somewhat rare, and, without some special source of supply, the water around the roots may be comparatively deficient in nitrogen, or ammonia. This we conceive to be a reason why ammoniacal or nitrogenous manures (those containing nitrogen or some of its compounds), are found to be so beneficial to plants.

Let the preceding statements be fully comprehended, viz.: that of the four organic elements making up the bulk of all plants, oxygen and hydrogen are abundant everywhere—in vapor in the air, and in the moisture of the soil; that carbon is also somewhat abundant in the atmosphere and in the soil; but that nitrogen, in an available form, is not abundant, and therefore its addition to the soil is likely to be more beneficial than any one of the other three elements named. With this view of the subject, our first question in regard to any proposed fertilizer would be: *How much available nitrogen, or ammonia, does it contain?*

PRACTICAL ILLUSTRATIONS AND DEDUCTIONS.

1st. The above theory is strongly confirmed by the experience of all observing cultivators. Weight for weight, pure Peruvian guano has proved to be one of the most powerful fertilizers; and this material, when of best quality, contains about one-sixth part of its weight of ammonia, or about one-seventh of its weight is nitrogen.

2d. Unburned bones contain much nitrogen, in a form to be readily transformed into ammonia, when they decay; and in our own practice we have found unburned bones, ground very fine so as to decay quickly, to be one of the best and cheapest manures for all kinds of crops. We should speak oftener and more strongly in regard to the value of bone saw-dust, or powdered bones, but from the fact that the supply is so limited that only few persons can obtain it in quantity. Though bones contain less ammonia in a ton than guano, they are sold at a lower price, and have the advantage of being harmless when put directly in contact with seed or growing plants, which is not always the case with guano.

3d. Blood, night-soil, sheep's dung, poultry droppings, and horse manure, are among the best fertilizers, and these yield much ammonia. Every one knows how strong is the smell of hartshorn, (ammonia) when horse-manure is fermenting or decaying. It should always be composted (mixed) with plenty of straw, or muck, or even with earth, to catch and hold its ammonia, and not allow it to escape into the air and be lost.

4th. Urine, (the liquid droppings of all animals,) contains much nitrogen. It can scarcely stand in a warm place for six hours, without a strong smell of hartshorn, (escaping ammonia.) Urine is so rich in ammonia, that not a pint of it should be wasted from either the stables or privies. Almost all the nitrogen in the excrements of a milking cow, is found in the urine, while the solid droppings contain but little. Hence the well known low value of cow manure, while the urine is so valuable to plants. In some of the most highly cultivated parts of Belgium, the urine of a single cow sells for $10 a year.

5th. The straw of wheat, rye, barley, oats, and corn, and others of a woody character, are organic materials, but they are chiefly composed of oxygen, hydrogen, and carbon, and contain little nitrogen. As every one knows, they make comparatively poor manures, though they are often valuable to loosen the soil. They yield a little ammonia, however; and perhaps their carbon is of some value, as stated above.

6th. Pea straw, clover, and some of the grasses, on the contrary, contain a considerable percentage of nitrogen. Experience teaches that a crop of clover, for example, when turned under, is one of the best fertilizers.

7th. Fats and oils are chiefly composed of carbon, hydrogen, and oxygen, being almost devoid of nitrogen. Who ever heard of pure oil, or fat, being useful as a manure?

9th. Lean flesh, on the contrary, contains much nitrogen, and this is certainly a very valuable fertilizer. Take a dead horse or ox, remove the fat, or not, and compost the rest of the animal with a mass of muck or earth, and the manure obtained will highly enrich from ten to fifty square rods of ground, the amount depending upon its previous good or bad condition, and the size and the amount of flesh of the animal.

And so we could go on with other illustrations, which, like the above, indicate that the relative amount of *nitrogen* in each of the articles is a fair criterion for judging of their comparative value as fertilizers. And here we will say, that, just what our theory would indicate in regard to the relative value of these articles as fertilizers, is in almost every case in accordance with what has been the result in practice.

Caution.—Many of the makers and venders of artificial fertilizers now publish analyses of their compounds. If this were always done fairly, the analysis would assist in estimating the value of the fertilizer. But, we are sorry to say, this is seldom the case. One mode of deception is, to get a true analysis of an extra good specimen, or selection, and publish this as a fair sample of the article sold in market. Another plan is, to employ some unscrupulous chemist, who has, by fair means or foul, obtained a notoriety, and whose analyses are guessed out in accordance with the *wishes* of his employer. A third and very common deception is, to give the analysis somewhat in detail, but instead of stating just how much ammonia or nitrogen it contains, we have figures showing a large percentage of "*organic matter, yielding ammonia.*" This is nonsense, or worse! A substance may contain ten to fifty per cent of "organic matter, yielding ammonia," and yet not contain half a per cent of ammonia. We advise to ignore every fertilizer which is put forth with this specious deception. For ourselves, we would not purchase any manure, which we did not *know* to contain the elements of 2 to 2½ per cent of ammonia, for every ten dollars of its price per ton.

There are certain fertilizers offered to the public, such as phosphatic guanos, and others, the proprietors of which ignore the value of ammonia, and base their claims upon the (supposed) value of the phosphoric acid. These we shall refer to in another article, when discussing the mineral constituents of plants, to which so much value *has* been attached.

Our limits preclude the discussion here of the mode of using manures. We will just add briefly now, that, as manures are designed to be absorbed by the roots of plants, it is important that they be *finely divided* or pulverized, and be intimately mixed with the soil. No single root of a plant, or small mass of roots, can do the feeding for all the others. The manure must be mingled through the soil, so as to be accessible to all the roots.

It may sound like a paradox, yet the breaking of both wings of an army is a pretty sure way to make it *fly*.

He is poor whose expenses exceed his income

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* After printing a few thousand copies of the first edition of our February number, which was hastily sent to press, the manure article, on page 40, was re-written more carefully, some new matter being added, and the final paragraph omitted. The following explanatory note was also added, and being important we repeat it here.——

Carbon, an element entering largely into all living substances, whether animal or vegetable, is seen in its nearly pure state in common charcoal—Oxygen, an element constituting fully half of the entire substance of the globe, mineral as well as organic, is never seen in its pure, uncombined state, for in this state it is a *transparent gas*, like air. It enters into combination with other substances, but is still invisible, just as lime is invisible when combined in mortar.—Hydrogen, which forms one-ninth part of water, and enters largely into many organic substances, is also an invisible gas, when not combined with some other element.—Nitrogen, which forms seventy-nine hundredths of common air, and also enters into many organic substances, is likewise an invisible gas when in its pure state.—Ammonia, is a compound of 14 parts by weight of *nitrogen* united with 3 parts of *hydrogen*. (Ammonia is familiar to most persons under the name of "Hartshorn.")

Duration of Vitality in Seeds.

That some seeds, under accidental circumstances, have an almost indefinite period of vitality, is evident from the fact that grains of wheat, taken from the hands or the wrapping of Egyptian mummies, several thousand years old, have vegetated during the present century. But such things are exceptions to the general rule. How then may we ascertain with considerable certainty whether the seeds we purchase are worth the money? Many experiments have been tried, and reports made, but not always with great accuracy. The following account is the most reliable, we can present. It is understood of course, that the seeds are kept under good circumstances—never in a hot, damp atmosphere.

Cabbage seeds, cauliflower, broccoli and savoy—good for four years.

Lettuce, spinach, carrots, radish, onions, parsneps, peas, beans and other leguminous plants—good for one or two years.

Beets, celery, cucumbers, melons, squash, pumpkins, gourds and the like—good for ten and more years.

Turnips, mustard, endive, sea-kale, asparagus—good for three or four years.

Tree-seeds—not to be depended on after the second year.

Oats, wheat and barley—good for three or four years.

Annual and perennial flower-seeds—good for two or three years.

Melon seeds have been known to vegetate when forty years old. Some careful gardeners prefer old seeds of the cucumber and melon tribe, because they think that new and plump seeds produce plants which make a rampant growth of *vine*, but bear little fruit, and that late in the season.

Rye has been known to vegetate when forty years old; kidney-beans, when one hundred; and raspberries when sixteen hundred (?); the Sensitive plant when sixty years old.

And here, a word upon *seed-saving*. It is of the greatest importance for the farmer and gardener to do this work well, as upon it his success greatly depends. It is with this, as with the breeding of valuable stock. He who gives his attention to it and becomes successful, will attract the notice of others, and his seeds will command abundant purchasers at the highest prices.

To preserve seeds well, they should generally be gathered when fully ripe, be well cleaned, dried in the shade, (not by strong fire-heat) and kept in a cool place, free from moisture. There are a few exceptions to this. Some seeds,—as horse-chestnut, acorn, maple, evergreens, grapes, apples, etc.—should be planted before they become dry, else they will not vegetate well. All seeds liable to be attacked by insects, such as peas, turnips and radish should be occasionally examined, and passed through a sieve, to clean them from dust and other matters likely to attract vermin. It is of the greatest importance to label seeds carefully, at the time of gathering them. A number of sorts, as of melons and squashes, are gathered at the same time, and as they look much alike, they get mixed, or their distinctive names forgotten. When planting comes around, what confusion? And if the mixed seeds are planted, what increased confusion at the fruiting-time?

Since writing the above, we see it stated that the seed trade of Boston amounts annually to three millions of dollars. Ten tuns of turnip-seed were sold there last year, and the same of beet seed. Of mignonette, 500 pounds only just supplies the market. The seed trade of New-York and Philadelphia must be much larger—we have no statistics on hand.

For the American Agriculturist.

Treatment of Breeding Heifers—How early should they Breed?

The first season of breeding with the young cow is a critical time, and her treatment then has much to do with her future character as a milker. Much of the popular prejudice against early bearing, say from the age of twenty to thirty months, is owing to the fact that animals with calf at this age are neglected, and do poorly. Said a distinguished breeder of imported stock, "If I want a good mother in any kind of animals, I put them to bearing early." It would not perhaps do to say, the earlier the better, but we have no doubt early bearing is better than late, if the young animals can have good treatment.

It is a well known fact that the treatment of the seed kernel before the shoot makes its appearance above ground, has much to do with its returns in harvest. Abundant supplies of food, just moisture and heat enough at this time, push out the young shoot vigorously, strengthen the roots, and prepare the way for the plant to take care of itself. The same law prevails in the growth of animals. If you wish to make a good milker of a young cow, she should not only be generously fed, and warmly sheltered, while carrying her first calf, but her food should be of a character to favor the secretion of milk.

This is very generally overlooked, and the heifers, even when they have to eat for two, have nothing more than hay, and perhaps not a full supply of that. They are often left to take their chance among the herd, and are driven away by the stronger cattle. A better way is, to give them separate stables or sheds for three or four months before calving, and supply them with extra feed, besides hay. Indian meal, oil cake, cotton seed meal, and other articles yielding oil, have a very favorable influence upon the organs that secrete milk. These organs become well developed, and leave a permanent influence upon the animal. She becomes a better milker for life. A quart of Indian meal and a peck of carrots, added to the daily feed of a heifer at this season, will be found to be a very good investment. With full feed, we can have early bearing heifers, without diminishing the size of the cows. The writer has had them come in at the age of twenty-one months, and make superior milkers. This is probably better economy than to have them go a year longer without making any returns of veal or milk. X.

Remarks.—Does not the writer of the above go too far? Judging from our own observation, we think that in the general practice of farmers, heifers are put to breeding too early. Probably more than half of all the cows in this country produced their first calves at two years of age. Neat cattle do not reach maturity of growth and size until past three years of age. As a general thing, nearly as much increase of weight is attained the fourth Summer—or the next six months after three years is attained—as during any previous season. With some breeds, and with good feeding, the full weight may be reached at the end of three years, but not as a general rule we believe. Now it hardly seems reasonable that a heifer should grow as well, when taxed with the extra duty of bearing a calf. It is claimed that early milking developes the milk vessels, but some of the best English breeders do not admit this. How far the loss in development of the cow may be made up by the gain of a year in the use of the animal is a subject worthy of consideration. As this is a question of considerable practical importance, and one but little discussed as yet, we shall be glad to have the views of observing practical breeders on the subject—not merely theoretical opinions, but the teachings of experience.—Ed.]

For the American Agriculturist.

Jotham Sparrowgrass with a Tile in his Head.

Mr. Editor.—"What's comin next," exclaimed Tucker as he saw Jotham Sparrowgrass' team drive up the road with a load of tiles, Uncle Jotham following after as fast as his cane could carry him.

"Should sooner have thought to see old Sparrowgrass on a tin peddler's cart, sellin wash basens and byin rags," responded Jones.

"Guess he's a gwine tu set up a krokery shop to supply the Whiteoakers with sass-pans and sich like," remarked Seth Twiggs with a sidelong glance at Kier Frink, as he stood leaning against the wall.

"Sass-pans, you fool! The coal men have got beyond that, I ken tell yew, and use tin like other folks. Guess ye better smoke less and see clearer Seth Twiggs," responded Kier Frink, who was tender of the reputation of the Whiteoakers, and felt his toes trodden upon a little.

"He aint a gwine to du nuthin of the kind," added Jake Frink. "Ye see, Uncle Jotham has caught Tim Bunker's disease, and is gwine to finish up that land round the musk-rat pond. He pretends that he don't believe any thing in the Squire's notions, but the fact is, there aint a bigger Bunkerite in town. You see, old Sparrowgrass was born when the sign was in the crab, and he gets at every thing sideways, jest like one of them are fish."

Jake Frink was not very wide of the mark in regard to Uncle Jotham's disposition. Ever since he made an open drain through the rim of his pond, and drained three acres Summer before last he has talked against new fangled notions, and fancy farming a little louder than before. He seemed to have a natural amount of satisfaction in his victory over the musk-rats, and the tad poles, but no particular delight in the dry land. But I could see all the while, that he was getting up to a new effort, side ways, as Jake Frink says. I loaned him the paper, and found he always had some inquiries to make about draining, how they made tiles, how the water got into them, how deep, they had to be laid, and how they worked. I have frequently found him down at my horse pond lot, running his cane into the ends of the tiles, where they empty into the ditch, as if to make sure that it was real water that was discharging from the hole. He evidently thought there must be some trick about it, that the water could not get into tiles after they were laid. But there was proof in that horse pond lot that he could not very well get away from.

I have been studying that lot some myself, this Winter. It is only two seasons since the tiles were laid there, and you would be surprised to see what a change the surface of the land has undergone. The light bluish clay that I threw out from the bottoms of the drains and spread around upon the surface, has all crumbled to pieces, and got to be about as dark as the rest of the soil. I have noticed all along over the drains, and for a considerable distance upon each side, the ground becomes dry very soon after a rain, and little cracks are visible. The land used to be so full of water that no air got into it, from November to May. Now the air follows every rain, and every freezing and thawing disturbs the whole mass of the soil several inches deep. The mechanical improvement of the soil seems to go on quite as rapidly in the Winter as in the Summer. Jack Frost, I guess, is about as good a friend as the farmer has, if he would only give him a chance to work. The tiles make a path for him, and he uses up the coarse lumps and clods a little better than any harrow I ever tried.

Uncle Jotham has doubtless seen these things, though he has said nothing and would have probably declared any time within the last three months, that tiles were the greatest humbug out, in his candid opinion.

The conversation I have reported among the wiseacres of Hookertown, occurred last Fall. A few days after I had occasion to go upon the Shadtown road to see what had become of the load of tiles. I found Uncle Jotham with three hands and a team, busy making ditches on the side hills around the drained pond.

"Good morning Uncle Jotham. I thought you didn't believe in crockery—rather pizen to the land?"

"Wal now Squire Bunker, to tell the plain truth, this 'ere business has been brewin in my mind ever since that horse pond of yourn was dreened off. And when I come to let the water off here, and got my first crop on land that was once under water, I had to cave in myself, worse than the tad-poles, when the water left them. You see, the taters I raised here on these three acres the first season, brought me five hundred dollars delivered at the landing, and that amount of money, ye see, would make tearin work with almost any man's prejudices. I found I could get the Hartford tile down there pretty reasonable, and I jest made up my mind to finish the job. Am I duin it right Squire Bunker?"

I found he had determined to put in drains upon all the side hills sloping down to the reclaimed meadow, leaving the drains there still open. These hill sides embraced four or five acres, and were naturally a heavy clay soil, always wet, until mid-summer. The drains were about three feet deep, and I found he had got a man used to the business, to do the work in the best manner. I have frequently looked over the ground this Winter, and it is a charming sight to see the various colored clays, and rough clods gradually breaking down under the action of frost and rain. The results of course, remain to be seen, but nobody who has seen the working of tiles, can doubt what they will be.

Thus the leaven of new ideas is working all through this region. When one man gets a tile in his field, another is certain to get one in his head, and after carrying it a spell, it is in due time laid, and carries water. When Jotham Sparrowgrass tile drains, you may know the world moves.

Yours to command,

Hookertown, Ct., Feb. 15] TIMOTHY BUNKER, ESQ.

Odd Hints for March.

As hay and straw will become drier, with the progress of the season, the supply should be a little increased, for feeding stock, and the quantity of roots not diminished.

Grass-lands which failed to receive their dressing of compost last Fall, may be attended to now, before the ground becomes soft. The manure dropped during the Winter, around hay-stacks in meadows, should be cleaned up and carted away on sleds before Spring opens: if left until May, the grass will be badly injured, if not killed. Dry meadows will take it kindly if you give them a bushel or two of plaster, or a few bushels of lime, or leached ashes, to the acre, and Winter grain, which got no plaster at sowing time, may well have it early this Spring.

Fruit trees exhaust the ground of its needful elements, and should be manured a little every year. A compost of chip-dirt and barn manure now spread over the orchard, will help the grass and the trees themselves.

Water-courses which are allowed to flow over mowing lands, should be frequently changed, so that all parts of the fields may get benefit from the irrigation, and the grass in no part become rank and uneven. Now, or as soon as the frost is out of the ground, this should be attended to.

If any dead animals—cats, lambs, dogs, calves, cows, horses, etc.—have accumulated around the premises during the Winter, now is the time to dispose of them. Instead of being hauled into some retired spot, to decay above ground and fill the air with noxious smells, they should be taken to some unoccupied corner of a field and covered with six or eight inches of soil: this will not only obviate unpleasant effluvia, but will contribute largely to the manure-heap.

Now is the time to look after seeds, if they have not been already provided Let every article be the best of its kind, if good crops are expected. The garden should not be forgotten. Peas, beans, tomatoes, lettuce, radishes, and the like, should be provided for before the hurrying season comes.

Now, split rails, and stack them where they will dry well, if they are not wanted immediately on the fences. Look well to all the farm-gates, bars, and bar-posts; let none be out of repair after this month. A broken fence often costs about the value of a crop. *

Caution to Bee-keepers.

MR. EDITOR.—While you are in the way of exposing humbug advertisements for the benefit of your readers generally, I would ask a little space for the bee-keepers and myself, particularly. I find that many patent hive venders are very free with my name,—attaching it to recommendations of hives that I never even heard of, as an inducement to purchase their worthless trash. This has been done in some quarters, till my reputation for consistency is in great need of repair. Take a sample of one of the boldest, emanating from some point in Michigan, where it was supposed, no doubt, that it might escape my notice.

"This is the only Patent Hive ever used by *Quinby*, the greatest Bee Raiser in the United States, who, before it was patented, offered $120 for his individual right, now sold for five."

And to make it still more like truth, he gives my name among others for reference. Now I wish it distinctly understood that I never offered a dollar for a patent hive yet. That I *never* recommended *any of them* but those with movable combs. And to prevent being accused of interested motives, even here, I would say that I have *no interest in any of them* beyond an individual right to use. Of these rights, I have any number, presented me, even the "Crossbar Hive"!!!

If you would assist in exposing this rascality, it might save some of your readers the trouble of writing, and of my answering numerous letters asking to be further assured of my opinion of this or that hive. M. QUINBY.

St. Johnsville, N. Y.

A man who is apprehensive of receiving insults is conscious of deserving them. True dignity never can be approached without respect, it is a coat of mail, which will always keep at a distance the contemptible intruder.

Advertising Information—Gratis....IX.

(*Continued from page* 38.)

About these days, when the planting season is coming on, it will be well to guard against the specious advertisements of irresponsible and unknown persons, offering wonderful or extraordinary seeds, plants, etc. We are constantly plied with advertisements of this kind from some part of the country, and are trying, at considerable sacrifice of advertising receipts, to keep such matters out of our columns. We may sometimes err on the wrong side, by shutting out a good thing, because it comes from an unknown party. Here are a few more items of "advertising information":

[No. 27.]

One of the largest advertising concerns in the country, is the so-called "N. Y. Farmer's Club." This body affords peculiar advantages for all classes, since anybody can advertise through it without expense, anything desired—positively reaching all those gathered at any meeting, and probably a larger circle through reports of the doings of the Club, in the papers. Though we long since ceased to waste time and patience in a regular attendance upon the Club, we beg to say that we do not *now* utterly condemn it, for many good things are brought out at its meetings—along with some things not so good. Formerly, when it was almost wholly under the control of the super-phosphate Professor & Co., and chiefly used as a place for retailing large stories, and advertising articles of sundry kinds, we were quite willing to endorse the remark of an old Western farmer, who came to our office after his first attendance at a meeting. Said he: "I thought, from the papers, that your N. Y. Farmer's Club was a great institution, but I found to-day a gathering chiefly composed of old fogies and humbugs, with green-horns, like myself, who dropped in to be enlightened." Latterly there has been a larger infusion of well-informed and well-meaning men—there have always been a few such—and we hope it may yet prove a useful institution. The only remark we have now to make, is, that the distant reader must not place too implicit confidence in anything done, or said, or recommended there, for the very good reason that everybody goes, and says, and recommends whatever may be for his pleasure or interest. The fact that a thing has been exhibited, and talked about, and recommended by somebody at the N. Y. Farmers' Club, must not be taken as a guarantee that the said thing is to be ardently desired by farmers everywhere, and procured at any cost. Here is a case in point:

[No. 28.]

In last volume, page 346, we merely described, without recommending it, a large onion from Portugal, which had been presented to us. A friend, with the best intention, borrowed the onion to show to some of his neighbors, and also exhibited it at the N. Y. Farmer's Club. It was talked about, was admired, and the comparatively "scentless" large onions raised *in* Portugal were spoken of. A report of the affair was, of course, published in the papers. As the result, we found in the Tribune of Jan. 31st, the following, under the head of "To Farmers and others."

> PORTUGAL ONION.—The subscriber, having imported a quantity of the seed of the SCENTLESS PORTUGAL ONION, referred to by Mr. ——— in the Farmers' Club, at their meeting, Dec. 19, 1859, will forward to any direction, postpaid, a sufficient quantity to plant two square rods of ground, on receipt of 50 cts. This Onion is of fine flavor, and devoid of any offensive odor. Address
> JOHN HOWARD, New-York Post Office.

Not knowing any regular seedsman of this name, who could have had a stock of the seed of *that* onion on hand, we were a little puzzled to know how it could have been imported from Portugal in so short a space of time, by any of the seven John Howards whose names appear in the New-York Directory, (including 1 tailor, 1 laborer, 1 carman, 1 exchange broker, 1 grocer, and 2 clerks.) But recalling that one John Howard, now deceased, was a great philanthropist, we thought perhaps our advertising John Howard might be another philanthropist, who, failing to otherwise exert a desired influence over our obdurate people, had concluded to try to bring them to *tears*, at least, and for this purpose had provided a supply of onion seed from Portugal. Wishing, of course, to obtain some seed of *our* onion, we at once wrote an affectionate letter to the advertising John Howard, asking the price of one to a dozen pounds, and among other things, soliciting an interview with reference to the purchase. But we fear our one big onion (fortunate that it is large) must suffice for our table all this year. Our letter was duly deposited at the N. Y. Post Office over two weeks ago, but no answer will the philanthropic or onion-thropic John Howard deign to give us .. *Memorandum*—Thorburn, Al len, Bridgeman, and other seedsmen in this city, have plenty of pure imported seed of the Portugal onion, which they will be happy to retail at $1.50 a pound. As a pound will sow at least 30 rods, enough to sow "*two* square rods" will cost *ten cents!*

[No. 29.]

Egyptian Corn.—Too late for notice last month, we received a note from a Postmaster in Crawford Co., Mo., enclosing a "circular," which he informed us, was being distributed throughout that State. This contains a glowing description of a wonderful Egyptian Corn...."Sent by the Pasha of Egypt to our Government....Most prolific in the world....Yields 200 bushels to the acre....Grows anywhere in the United States....Ripens in 90 days.... Two crops can be grown in a single season, on same piece of ground....Grows in the form of a tree....22 ears have been grown on a single stalk....Averages 5 to 15 ears of similar shape to other varieties....1½ bushels of ears yield a bushel of shelled corn, weighing 65 lbs.... Makes the best of meal, and, when properly bolted, a flour almost equal to wheat flour in color and fineness....By incurring much expense, enough has been secured for all desirous to try it," etc., etc. [We call for a Committee of Congress to inquire about the bribe paid to our Government by this man, to secure a monopoly of this *Pasha* seed corn !] Such are some of the wonderful things claimed for this corn, which is, as *he* says, "a wonder to all who have seen it." A precious small number, we hope—notwithstanding the fact that the advertiser generously offers to send for $1, not enough to plant 25 to 30 acres, *but*, "a sufficient amount to grow enough to plant the succeding year from 25 to 30 acres." Why, one seed ought to be enough to do this, with such a prolific corn. It would seem as if the advertisement itself would be sufficient to guard people against this *humbug*, for such it is, doubtless; but we are informed from more sources than one, that the picture on the circular, the specious and apparently candid statements, and the efforts of those offered a commission to procure buyers, are successful in gulling a good many verdant buyers to invest their dollars. This humbug hails from Sandwich, DeKalb County, Ill., fathered, perhaps by the same party who last year figured in the Honeyblade Grass Swindle, in St. Louis, but who now operates *in* Missouri at a safe distance. We advise him to quit this business, and come East, buy out some journal, offer $2 worth of books for every 1$ received for subscription, and a big picture into the bargain, also keep a gift-book store in the same building, but under another name, and puff it in the journal, &c. He can thus put on a more dignified air, and perhaps make more money than in selling honeyblade grass or Egyptian corn. We can point him to an example here.

[No. 30.]

Gift Books.—A year since we were offered $100 worth of advertising by each of two "gift-book" men, which was, of course; refused; for we look upon these operators as humbugs. Sometimes a few valuable gifts are given out as baits, but taken as a whole, the thing is a nuisance. One of the parties, on being refused, made a great show of innocence and respectability, and got vouchers all the way from Philadelphia for his good character, and almost demanded the admission of his advertisement. To-day, that man lies in our City prison. He ought to have several companions, who are now *lying* out of it.

[No. 31.]

Crippled Doctor.—Here is one of a class of circulars sent out from this and other cities, got up in an attractive form, and well calculated to deceive the unwary. The writer begins by working upon the sympathy of the reader, telling a tale of former opulence, extensive practice of 34 years as a 'prominent practising physician in the State and City of New-York, in colleges, hospitals, etc.... The teacher of many of the learned medical men throughout the Union," etc. Then we have him crippled by being thrown from a carriage, when on one of his errands of mercy; then ruined by the crisis of 1827; and now, in old age, poor, with only one resource—his knowledge and unlimited experience—to gain what will soothe his declining years and "sustain his family." [According to his own account of his age, his family ought to have been grown up long since, to sustain themselves.] He then goes on to speak of his great skill in curing particular diseases—consumption, nervousness, etc., etc., (in short, before the close of his circular, he enumerates about all the diseases anybody has, or dreams he, or she, has) Now for the meat in that cocoa-nut. He closes by offering to while away his declining years in giving full and succinct prescriptions for the diseases named, at only a dollar each, and says: "Any one of his prescriptions will cost but a single dollar, and will last forever." He decries patent medicines and common doctors generally. From the style of this circular, it is well calculated to deceive. The name of this swindler is not in the City Directory. He does not give his street No., but we are not going to gratify him with a dollar, even to get his autograph. We have spent the dollar, and more, however, in making inquiries of old physicians here, and no one has ever heard of the man, in the past or present. He is an arch humbug of the deepest dye, and it is very likely that he is that old physician (James) whose sands of life have been running out for 30 years—that being about his (old)age, as near as we could judge by his looks. We will give our readers one prescription, which they may follow in all cases, viz: *No skillful, or honest, or reliable physician, aged or cripple, practicing in New-York city, ever sends out of it for practice, by circular or advertisement. Every one who does so is a humbug without fail.* The rule applies to every other locality as well as here. We hold ourselves responsible for all damage to patient or "physician" resulting from following this prescription.

[No. 32.]

A subscriber in Kent County, Mo., is informed that the Doctor, inquired about, was a former graduate of the Medical College referred to, but is now none the less a quack for that. In his present character, he would not be tolerated a moment by any of the medical faculty. His pills, extracts, books, secrets, papers, etc., etc., you will do well to give a wide berth. We again caution all our readers against responding to one of the plausible medical circulars, etc., sent out from this City. See also the prescription italicised above. The "pure medicinal liquors" inquired about, are chiefly *manufactured* IN this City, and not so safe or good "in sickness" as the commonest unadulterated whiskey.

(*To be continued as needed.*)

Hints on Wire Fences.

To the Editor of the American Agriculturist.

The perusal of an article on wire fences in the volume just closed (p. 327), induces me to offer the following suggestions, founded on experience and observation, as I reside in Illinois, where these fences are constructed in a variety of methods, and have their strong advocates, as well as enemies. For myself I have no doubt of their utility.

The posts should be set every eight feet. The first or corner post and every fortieth post, should be larger than the rest, and be firmly set in the ground, to a depth of three to four feet, according to compactness of soil, and be thoroughly braced. The braces should not be less than twelve feet long. The intermediate posts may be driven in the ground, which is preferable when the ground is not too hard. In driving the posts, a machine similar to a pile driver may be used. The machine is made quite light. To use the machine, we let one end of the bed pieces of the machine rest on the hindermost axle of a wagon, the other end has supports so braced that the bed of the machine may keep nearly a horizontal position. The wagon loaded with posts is driven as nearly over the line of the fence as possible. Should the *driver* of the machine not be directly over the line in which the post is to be driven, it may be brought in line by moving to the right or left, as one end of the machine does not rest on the wagon. By this method two men and a team can distribute and set as many posts per day, as six men can in any other method with which the writer is acquainted.

The posts should be driven until they are at the required hight, which is readily ascertained by a fence pattern carried by one of the men.

The posts are pierced for the wires, after setting. Of course they should be set so that the wire will pass through the least diameter or thickness, as this saves boring. The boring should be through the heart wood when practicable—never through the sap wood when it can be avoided. A convenient pattern is made thus: take a board ½ inch in thickness, 2½ to 3 inches wide, and as long as the hight of the fence. Plane it smooth, rounding the corners. Mark one end "bottom," and then measure off upon it, points corresponding with the hight of the several wires from the ground. At each of these points make a plain mark around the pattern, numbering each point 1, 2, 3, etc., from the ground upward. The marking is best done with a hot iron. Also cut at each point a hole or mortice, a little larger than the bit to be used for the wire, extend the mortise crosswise say one inch, or ½ inch each side of the center. Make a round ½ inch hole a foot or so down from the top. This is to hang it by upon a large cut or wrought nail driven slightly into the post The pattern then swings down, so as to bring the mortice holes perpendicularly over each other, along the flat side of the post. The wire holes are then bored in the proper places by inserting the bit through each of the mortised holes in the pattern.

For wire, that which is annealed, and of the best quality only should be used. Many think No.9 to be strong enough; but it is liable to be broken. The writer in putting up some two miles of fence the past Fall, used No. 8. The coils may be placed loosely upon a reel, or rod, and be unwound from it. The wire is first passed through the straining post, then on through each intermediate post to the next straining post. About a foot of the wire is left projecting through each straining post.

To tighten the wires, the following method has the advantage of simplicity, and is effective. Cut for each end of the several wires a short roller, say six inches long and two inches in diameter, and bore a ¾ inch hole near each end, making the two holes at right angles to each other. Fasten the end of the wire to the middle of the roller with a staple [or by thrusting it through a small hole and clinching the points. ED.] The wires are then wound upon the rollers, first at one end, and then at the other. A couple of iron rods inserted in the holes give sufficient lever power to tighten the wire to any required degree of tension. The holes in the rollers being at right angles, one iron bar turns the roller a quarter around and holds it, while the other is moved. When the tightening is accomplished, to hold the rollers from turning back, wooden pins are put into the lever holes, and left to rest against the posts. A wire being loose at any time, can be tightened by applying the iron bar and shifting the pin.

Boring the posts is preferable to fastening the wire to their sides with staples, for unruly cattle will break through by tearing out the staples. A fence built after the manner described above will answer all necessary conditions for confining cattle and horses. There should be not less than five wires. The wire fence is not completed until three or four plow furrows are turned up against each side. ILLINOIAN.

[REMARKS. The above plan appears to be a simple and effective one, still, the wooden rollers and pins would not be very durable; and further, this method does not provide for a self acting and constant tension, to counteract the ever varying contraction and expansion of the wire by heat and cold. We saw some fences in Illinois two years since, in which the wires were wound upon cast iron rollers, one end placed in the post, and the other made large and pierced with holes for levers, upon the ends of which, weights were hung, to rise and fall with the contraction and expansion of the wires. We shall be glad to hear from some of those who have used these rollers, as to their utility, cost, etc., and also to receive a sketch or drawing of one of the rollers, and of a section of the fence fitted up. ED.]

* * *

A nosegay is easily obtained. Four brandy toddies a day for a couple of months, will put you in the way of one that will astonish all your friends.

A Buncombe (buncum) fence was described by a witness under examination in court as: a fence that is built strong, horse high, and pig tight.

How to Keep Farm Accounts.

To the Editor of the American Agriculturist:

The idea of keeping farm accounts, as recommended by your correspondent in the January No., page 8, I like very much, but I think he has spread the thing out too much. A plain farmer, like me, gets puzzled over a *a journal, a ledger, stock book, wages book, etc.* It seems hardly worth while for a man with an ordinary sized farm to build a separate barn for each kind of hay, grain, and roots. It answers the purpose better to have several divisions in the same building; just so, I think it is better to have fewer books for accounts, and when people find out that it can be done easily and without much "book learning," they will be more likely to try it. My plan is this: I keep with me a little pocket memorandum book, in which I note down very briefly such facts and figures as ought to be remembered, to be transferred, (every night if possible) to the "Diary," which I make thus:

I buy a quire of foolscap paper, stitch the backs together, cover it with pasteboard or thick paper, and label it properly on the outside. In this book I write out more fully the entries in the pocket memorandum, and whatever else I think ought to be kept in mind. Here is a specimen:

April 1st—Commenced plowing the North lot; ground in good condition.—John Glass commenced work according to agreement made Feb. 15th.—Sold "Brindle's calf to butcher Egbert, for seven dollars, to be paid for April 9th.—Repaired my half of line fence next to George Blair.—Bought 2½ Bush. seed corn of L. Smith, at $1 per bush—to be paid May 1st.," etc.

A bound blank book, ruled plain, would not cost much, but as I commenced in this way years ago, and it answers the purpose, I have kept on using the stitched sheets. When a book is filled, it is numbered, and laid away with former volumes for reference. For my Ledger, the only other book I find necessary, I buy a blank book properly ruled, containing about 4 quires. In this I keep a record of all money transactions, accounts with hired help, with persons trusted for articles bought, and with each field. Here is a sample.

Date. 1859.		P.	WEST LOT.	DR. $	cts.
Ap'l.	13.	6.	To 4 Days Plowing @$2.50........	10	
"	14.	"	" 1 Day Harrowing.	2	50
"	"	7.	" Seed and Sowing...............	3	25

The column next to the date, marked *P*, shows on what page of the Diary other particulars of the work are recorded. A page may well be devoted to each lot; another to sheep; another to cattle; another to horses; another to swine; another to poultry; another to household expenses; one to each hired man; and so on. Where there are a number of accounts, the book may be paged, and an index placed on the first leaf.

Each account has two pages, one for Dr., the other and opposite one, Cr. When a page is filled, the account is balanced, and two more pages taken. I have an account with the farm as a whole, in which it is charged with the cost of the land, all permanent improvements, such as buildings, fences, ditches, new implements, interest, taxes, etc., and whatever is not fairly chargeable to any particular field or crops.

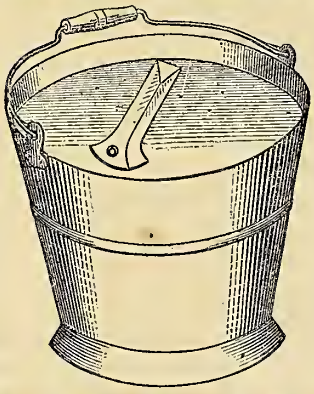
The cash account is kept in the same book. All money received is put on the Dr. side, and all paid out on the Cr. side. This balanced at any time shows how much is, or ought to be, on hand. At the end of the year, all balances then due from individuals, the amount of the property on hand after deducting for debts due to others, together with the estimated value of the Farm, are placed on the Cr. side of Farm account, and a balance taken, shows what I am worth. This balance compared with that of the previous year, shows which end of the horn I am coming out of. If I have lost money it is some satisfaction to discover the leak where it escaped, so as to stop it in future; if I have gained, it is pleasant to see it in figures. JONATHAN.

Frost Work—A Phenomenon.

[The following interesting letter arrived too late to have the engraving made for February. There are many strange phenomena exhibited in the effects of frost upon water, as every country dweller well knows. They are seen in brooks, on frosted windows—in short everywhere. We have not had time to devote to an examination of the case here presented, and if we had, perhaps could not explain it. Water follows regular laws in crystalizing, and perhaps in this case, the expansion of the water in freezing forced some of it up gradually at one point, and it froze on the edges as it rose up, and thus produced the singular hollow tube. This is merely a suggestion at first thought. Some scientific reader will probably furnish an intelligent explanation.—ED.]

To the Editor of the American Agriculturist:

Having greatly enjoyed the monthly visits of your journal, and knowing you to be an ardent admirer of the varied works of nature, I send a pencil sketch, and description of a singular phenomenon. On the evening of Dec. 29, 1859, Upton R. Maul, Esq., of Harford County, Md., placed on a table in a cold room of his dwelling, a two-gallon tin bucket, nearly full of clear spring water. In the morning, the water was covered with a thin crust of ice somewhat rough and uneven. Near one side of the vessel was a beautiful triangular prism of ice, that had shot up above the surface, at an angle of precisely sixty degrees. This extraordinary formation was 4½ inches high, and terminated in an isosceles triangle, measuring 1⅛ inches on each of its two equal sides, and 15-16ths of an inch on the third side, but was larger towards the base. It was hollow and full of water, the walls being about one-sixteenth of an inch thick at the top, three-eighths at the bottom, and transparent as crystal. To ascertain whether or not there was an open communication between the fluid in the prism and that in the bucket, the stem of an ordinary clay pipe was introduced, but the end of it rested on ice at the lower part of the column. As a second experiment for the same purpose, the feathers were stripped from a goose-quill, and the small end put gently down the hollow, and it passed through to the main body of water without any apparent obstruction. As the day advanced, the liquid inclosed in the prism gradually congealed, until it became solid. Near the middle of the base there was now seen a circle of about ¼ inch in diamater, presenting the appearance of very fine white moss, coiled up in the shape of a button; while the column was beautifully ornamented by delicate silvery threads, radiating from a straight central line, as regular as the fibers of a small feather, and not unlike them. Upon the whole it was a rare and splendid display of Nature's plastic skill. This curious specimen of frost work is still in a tolerably good state of preservation, at this date, and has been examined and admired by many gentlemen of the neighborhood.



And now, Mr. Editor, I earnestly solicit from scientific gentlemen, an explanation of the probable causes that led to this strange result. By what law of congelation did this portion of ice *ascend above the surrounding level?* Why did it crystalize in the form of a *triangular prism?* Why did it rise at an angle of precisely *sixty* degrees, rather than in a perpendicular direction? Why was it *hollow*, with the water unfrozen at the top and throughout the column, although exposed to the same atmosphere that covered the bucket with ice? Why did the cavity close up in the *morning*, when the air was evidently warmer than during the *night?* Did the water ascend by the influence of *atmospheric pressure*, or by *capillary attraction*, or by some other agency?

Harford Co., Md., Jan. 6, 1860. THOS. HENDERSON.

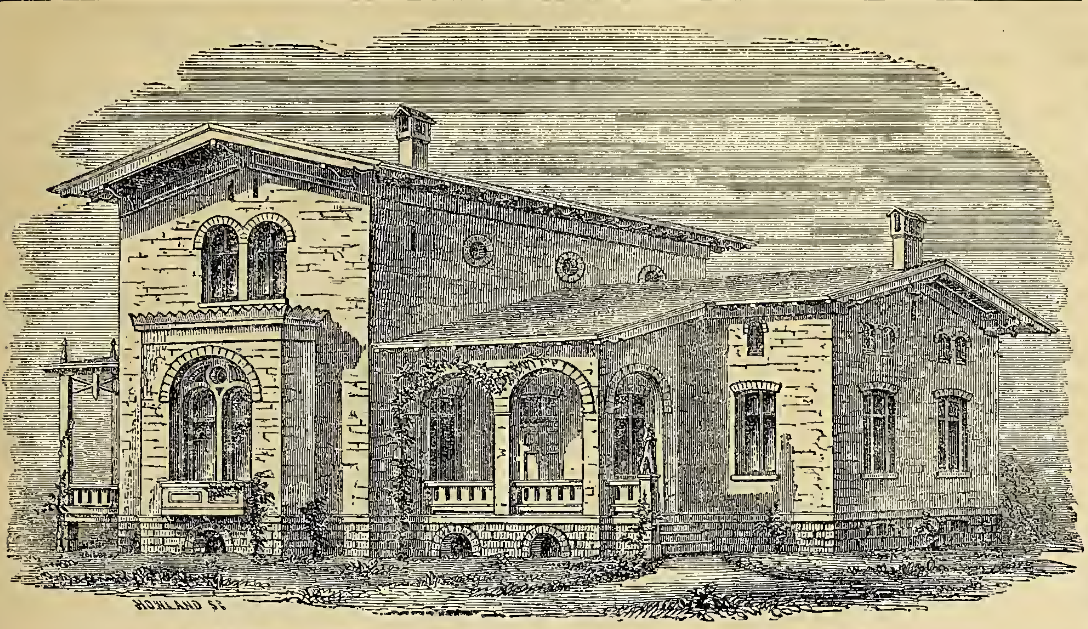
Horizontal Wells.

Some of our cotemporaries are discussing horizontal wells as if they were a new idea. The principle is the same as that of artificial springs, with which most of our readers are familiar. It is claimed that in running a horizontal shaft into the side of a hill, we are more likely to strike a living vein of water, than we would be to go down the same distance perpendicularly. However this may be, it is one of the most convenient methods of furnishing living water in pastures and meadows now destitute. The plan of bringing the water from some high ground at a distance of half a mile or more by means of a lead pipe, is frequently resorted to, and this is sometimes the only resource where the dwelling or barn stands upon high land.

But when the object is to bring water into a large pasture and where any place will answer, it is frequently feasible to bring out a hidden vein of water at the lowest point of the pasture at very small expense. The detection of veins of water is regarded as a peculiar gift, and many have implicit faith in the hazel rod in the hands of these gifted individuals. The rod is said to turn down invariably over the vein. This is sheer nonsense, but there are indications of water veins, which any one familiar with the land for a year would readily detect. Where water is accustomed to stand in Winter, or late in Spring, there must be a natural supply not far beneath. Where spots of grass remain green in a very dry time, or until late in the Fall, there is usually water not far off.

But in any hilly land with a heavy clayey subsoil, we would not hesitate to dig into any hillside where there were indications of water. Water is often found at a depth of ten or fifteen feet from the surface, in the dryest time. After the trench is dug up to the head, it may be enlarged to six or eight feet in diameter, stoned up three or four feet high like a well and covered. The drain leading to the outlet may be laid with tile, or common stone snugly covered. Such a spring when once made is just as good as a natural one. Upon the farm where we were brought up there were two of these fountains—in pastures once without water in Summer. Thither sheep and cattle resorted daily for water, and laborers, when they were at work in the neighborhood. Their value to the farm was beyond price.

Agricultural—What goes most against a farmer's grain?—His mowing machine of course.



A FARM HOUSE—Residence of Mr. Wm. H. Smith, Addison, N. Y.

It is our intention to present from time to time a variety of plans for dwellings, including not only those of large and costly construction, but also those of small size, and involving but comparatively little expense. We present herewith one of moderate size, but rather above the medium cost of well-to-do farmers' dwellings. The expense of this structure was somewhat over $4,000 we believe; it was built in a thorough manner, entirely by "day's work." The main walls are of brick, painted dapple gray. The roof and "trimmings" are of wood, the trimmings painted with "burnt sienna," and the roof with blue. The elevation plan as well as the internal arrangements are, we think, open to some of the same objections that were made to the plan published on page 297 of last volume (Oct. No.) The roof is too light, and the bay-windows and some other parts too heavy.—The Ground Plan shows an ample supply of pantries and closets, which is a very desirable provision in every dwelling, and one not usually sufficiently looked after. The relative position of the main rooms does not strike us as the best for a farm house where there is much work to be done, and a prominent end to be kept in view is to "save steps." In the plan, fig. 2, the kitchen, *E*, is too far separated from the Dining-room. There are two objections to this; first, the cooked food, dishes, etc., must be carried through two or more doors and a hall in passing to and from the dining-room and kitchen; and, *second*, as either the dining-room, *D*, or the bed-room, *H*, must here be used for a sitting-room, the matron of the house must be too far from the direct oversight of the kitchen-work. But not to go into particulars, we think that for our own use we could make an entire re-arrangement of the rooms, pantries, etc., with advantage. Others may think differently, and we leave each to study the plans, and derive such useful hints as they can. The Chamber Plan, fig. 3, has five bed-rooms, 1, 2, 3, 4, 5—the cross lines showing the positions of the beds; 6 is a bath-room; 7, stairs; 8, chamber-hall. The supply of closets is apparently ample. The special arrangement here, we understand to be that of the proprietor—the architects claiming that with the same general plan of structure, a great variety may be made in the internal arrangement of rooms. This building, which was designed by Messrs. Saeltzer & Valk, architects of this city, is given by them as an illustration of what they propose as a "new American style." We must frankly confess that we are not pleased with it, but since they call in question our individual taste in architectural matters, we have given them another opportunity to lay their plans before the public for a verdict. Whatever is worthy will be found out and adopted. If the "new style" gives general satisfaction we shall be disappointed, and acknowledge our want of taste.

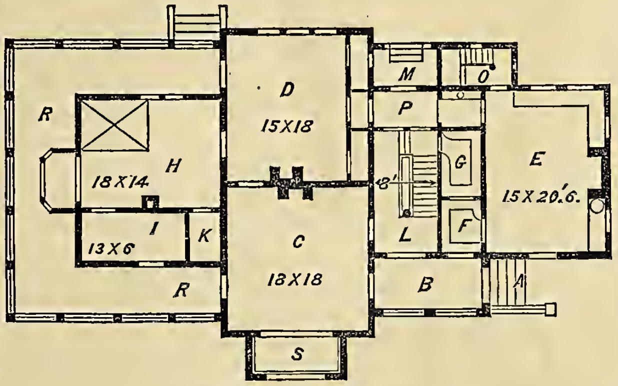


Fig. 2—Ground Plan.

A	Entrance.	*D*	Dining-room.	*P*	Hall.	*I*	Dress-room.
B	Vestibule.	*E*	Kitchen.	*M*	Rear Entrance.	*K*	Closet.
L	Hall.	*F*	Pantry.	*O*	Back Stairs.	*R*	Verandah.
C	Parlor.	*G*	Store-room.	*H*	Bed-room.	*S*	Bay Window

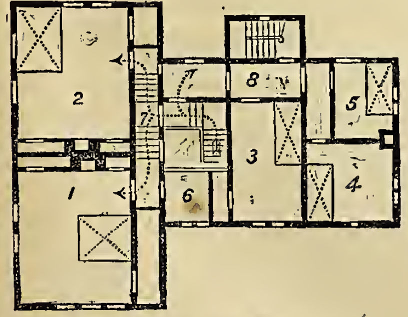


Fig. 3—Chamber Plan.

* * *

If a miscreant sets a stain upon your character, you can't wash it away with his blood; the foul fluid would pollute rather than purify the stains.

How to raise Early Potatoes.

A dish of new, mealy potatoes, about the middle of June, is not to be despised. They are good upon the table, and by no means bad in the barrel, on their way to a lively market, at one to two dollars a bushel, and upwards. There is a difference of a month or two in the time required by different varieties to mature. This fact is often overlooked by farmers, and they continue planting only the late sorts, and have no new potatoes until August. Early varieties are a first essential in getting an early harvest. The Mercer or Chenango will mature in about twelve weeks, and with forcing, in ten. It is not so apt to rot when forced, as when planted late. The early Sovereign, Carpenter, Studley's Seedling, Wendell's Seedling, Dykman, and the early June, require a still shorter season, say from six to twelve days. In almost every section of the country there are early potatoes, probably quite as good as any of these.

There are several methods of hastening their maturity. A favorite method with the German market gardeners is, to bring the seed potatoes in barrels into a warm room, about the first of March. The eyes start rapidly, and in about two or three weeks they are ready to plant. Another method, which we have practiced for some years, is to start the potatoes in a gentle hot-bed, about the middle of March. The tubers are cut in halves, and laid flat side down upon the bed, as thick as they can be placed. They are then covered with about two inches of garden mold, and the sashes are put over them. As soon as they are up two or three inches, they are ready to transplant. They should be removed carefully, separating the roots with as little breaking as possible, and put in the drills where they are to grow. As they do not yield a full crop under this treatment, they can be planted closer, than in common field culture, say in drills thirty inches apart, putting the hills twelve inches apart in the drill.

A warm, sandy loam, sloping to the south or southeast, should be selected for this crop. It should be well manured with horse dung, about half of it applied in the drills. Some manure their grounds for early potatoes in the Fall, and this is, we think, a good plan for that part of the manure which is applied broadcast. Fresh horse dung in the drills raises the temperature of the soil, and hastens their growth.

Remark.—To the above, written by one of our associates, we will add that we have succeeded well on a small scale, thus: Two or three weeks before the time when it will probably do to plant out, take pieces of turf or sod, say four to five inches square, and put a piece of potato in each. These are set closely together where they can be watered as needed, and can be exposed to sunshine. Whenever there is a cold night, or "cold snap," straw is put on to keep them from freezing. They sprout and fill the turf with roots. At the proper time the pieces are set in the open ground, one piece in a hill, and the growth is hardly checked. The turf itself also acts as a manure to aid the growth. In this way two to four weeks may be gained.—Pub. Ed.]

* * *

Question for discussion by the (N. Y.) Farmers' Club: Is the use of *hose* beneficial to corns?

Blinks from a Lantern.......XVII.

BY DIOGENES REDIVIVUS.

MARKET DAYS.

Farmers seldom stop to consider the time consumed in marketing their products, or the bearing of ready sales upon their prosperity. There is a wide difference in this respect, between the British and the American farmer. The former has his regular market days, occurring once a week or fortnight in the busy part of the year, in his own neighborhood, where he can sell any commodity he has on hand, at the average market price fixed by his own class and by the lively competition of purchasers. The latter has no regular market day, and peddles his products generally at such prices as his own necessities compel him to take. The one makes large sales with little loss of time, and generally at a profit; the other makes small sales, with great loss of time, and often at a sacrifice, because he feels that he must sell what he has brought with him over a long rough road.

The want of good market facilities is one of the great drawbacks to our husbandry, and is often the reason why farmers get discouraged and turn their attention to other employments. Let us turn the light of the lantern a little upon this subject. To illustrate the condition of farm sales in this country, take the case of Andrew Stokes, who owns a snug farm of two hundred acres in Pomptown. He carries on a sort of mixed husbandry, like most of his neighbors, and for the last twenty five years has spent Tuesday of each week in marketing the products of his farm. His trip is fourteen miles, and to be in season for the morning sales, he has to leave home at two or three o'clock in the morning. He has adopted the system of consuming the most of his vegetable products at home. He peddles veal, mutton, lamb, pigs, butter, cheese, eggs, apples, quinces, cranberries, and a little of every thing produced in his neighborhood. His sales in the course of a year, perhaps, amount to five hundred dollars—which have cost him his time and the use of his horse and wagon for fifty days in the year, worth at least one hundred and fifty dollars, or about a third of the amount of his sales. It will be seen that this is an enormous tax upon the farmer's industry.

Yet the case of Mr. Stokes is by no means an uncommon one, though the tax is more than an average, by reason of his greater distance from market. Most farmers pursue the same plan, selling all through the year such articles as they have to dispose of in small quantities, at the nearest market town. Some spend two days in a week in this business, others perhaps not more than one day in two weeks. The sales are generally made without any accurate knowledge of the market, and for the benefit of those who are experienced in trade, rather than for their own. The merchant knows that eggs are worth twenty five cents a dozen, but the farmer does not, and sells at twenty because he happens to be in debt to the merchant, and wants to square up. He sells his grain, butter, and cheese a little under the market for the same reason. The man of trade, who keeps himself posted upon the markets, has the advantage over him at every point.

The English system of market days has several advantages over our hap-hazard and miscellaneous sales scattered through all the days of the year. In the older northern States, the population is dense enough to sustain regular market days, and the effort should be made immediately to introduce them, and give them a fair trial. Every county with fifty thousand people or more, might establish days of sale, at four different points, on successive Wednesdays of each month, bringing every farmer once a month within a few miles of a market frequented by thousands. The present system should be wholly abandoned, and the buying and selling of farm products, should be concentrated upon these days.

A first advantage of this arrangement would be to bring every farmer within easy reach of a regular home market, where he could sell every thing that he produces. The sales of the farm would be transferred from the present peddling system, to a wholesale business transacted with dispatch. Instead of spending a whole day in disposing of ten dollars' worth of truck to as many different purchasers, the sale would be made in a few minutes to a single individual, the money be pocketed, and he might be on his way home. Instead of any doubt hanging upon his mind that he would be able to sell advantageously what he produced, he would be stimulated by the ready sales to produce all he could. It would make farming much more of a cash business. Now, multitudes see very little cash, except at the end of the year. They carry their products to the country store or village, and barter them for such articles as they need, settling but once a year, if as often.

It would also bring the purchaser to the producer, instead of sending the producer to the purchaser. Or rather, it would institute a place of meeting for the two, where both parties would have the advantage of competition in sales and purchases. Neither could take advantage of the other's ignorance, for every man would know to what point the market prices would settle. The reports would be upon the ground, and every man could examine for himself. Instead of offering his articles to a single purchaser, he would have, perhaps, a hundred inquiring for them, all being on the ground for the express purpose of buying. It would introduce into the country, something of the business activity and pressure witnessed in the large city markets. All coming together for the express purpose of trade, the sales would be made with dispatch. This infusion of enterprise into a class that are now so isolated upon the farm, would be of incalculable advantage. It would soon show itself in many ways in the improvement of agriculture.

It would also tend to equalize the prices of farm products. Now, many of these products have no standard value, and one is surprised to find ten, fifteen, or twenty per cent difference in the price of potatoes, apples, milk, butter, cheese, and other articles in communities very similarly situated. These fairs, or market days, would soon attract attention, and would be thronged by purchasers from all parts of the country. The competition of these individuals would tend to equalize prices. The reports of the markets would be published, and farmers would know what price to insist upon, and when to hold over any description of articles, for a second day.

This system of sales, too, would have a tendency to provoke a healthful emulation among farmers, in regard to the quality of the articles offered for sale. They would see the advantage as they can not now, of presenting every thing in the best possible condition. There is a difference of fifty per cent made in two articles of butter. The one is little better than soap grease, and the other has a clean, waxy appearance, hard, yellow, and sweet as the flowers of the grasses from which it is manufactured. Farmers would soon be educated in these differences, by seeing them continually brought out, and affecting market values. In many ways these market fairs would operate to diffuse the most valuable information among our rural population, the knowledge that most immediately affects their business.

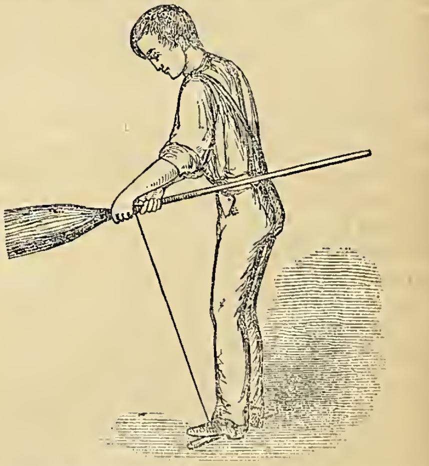
It would also foster a division of labor upon the farm. If there was a sale equally ready, and profitable for every thing, the farmer would prefer to simplify his business, and rely mainly upon one thing for his profits. Thus we should have dairy farms, stock farms, sheep farms, and in every respect a more perfect division of labor. By giving his attention mainly to a single branch of husbandry, the farmer would be likely to master its mysteries, and could hardly fail to make it more profitable. These are some of the more obvious reasons in favor of the English system of market days. The matter is already exciting attention in this country, and a few of these fairs have been held with a good measure of success.

Home-made Corn Brooms Again.

ANOTHER METHOD DESCRIBED.

To the Editor of the American Agriculturist:

When a boy, I learned to make corn brooms in a different manner from that described in the January *Agriculturist* (p. 3). I will give my method and your readers can choose the one best adapted to their wants: Put the but-ends of the brush in warm water to soak awhile. When sufficiently softened, tack one end of a strong twine to the broom handle, about three inches from its lower end. Fasten the other end of the string, which is about two feet long, to a small round stick upon which you step with *both* feet as shown in the annexed engraving. Lay on the brush, one stalk at a time, and give the handle a turn sufficient to hold each new stalk firmly. Continue putting on and winding, until three layers have been secured, pulling upward as the handle is turned to tighten the string. Now commence another row nearer the lower end of the handle, and proceed as before, finishing the third course or tier with the longest and finest brush. Wind the cord around snugly a few times after the brush is all on, and fasten the end with a carpet tack. To make a broad or flat broom, more of the brush may be put upon two opposite sides than upon the other portions. Then tie the two ends of a string the right length, slip it over the handle and to a suitable place upon the broom, and sew it as already described in your previous article. You now have as neat a broom as you can buy, and stronger than most of those in market. With a little practice they can be made very quickly. When a boy I thought I was making money when manufacturing brooms at a dime apiece. Wire can be used instead of twine.



Ripley Co., Ind. JOHN BENNETT.

About Frost.

A knowledge of the laws which govern frost, is of great importance to the farmer and gardener. In a friend's grounds last year were several grape-vines, some trained on trellises in the open garden, and others on walls and fences. In the desolating frosts of June, those on the trellises lost both their foliage and fruit, while those on the walls and fences lost only a small part. Those on a wall which had a cornice projecting a foot wide over the vines, were not injured at all. Where, however, a stray branch projected from the wall more than a foot, it was frost bitten up to that very point. And all the young tomato and other plants on that border outside of the projection of the cornice, were cut to the ground.

These facts illustrate the principle to which we wish now to refer. In a cool and clear afternoon in May, the gardener has learned to predict a frost at night, unless clouds, or a wind arise. When the sky is clear, the heat of the soil passes off into the upper air without obstruction, but if there are clouds in the sky they throw the heat back. Sometimes, the gardener finds frost on his plants, when the mercury of the thermometer is several degrees above the freezing point, because the air on the surface of the ground is colder than that above.

On windy nights, even with a clear sky, there is less danger of frost than in calm weather. The wind does not prevent radiation of heat, but it brings in warmer air from above, and causes it to sweep along the ground and impart to the soil a portion of its heat.

As clouds intercept the heat and cause it to descend to the earth, so any other substance placed over the soil will produce the same result. The ground under the branches of trees in a forest is less frozen in Winter than on an open plain, chiefly because these branches obstruct radiation of heat. So in a garden, the branches of a tree or bush have often been noticed to protect tender plants from Spring frosts.

The cornice on our friend's wall, which protected his vines, did not shield them from "the *fall* of the frost," as the expression is often used, but prevented the rapid radiation of heat. Heat radiates in every direction, and nearly half the heat from such a vine was intercepted and returned by the wall and the cornice.

On any cold night when frost is apprehended, all we need to do, is to place over our tender plants something to obstruct radiation. A thin cambric handkerchief has sometimes protected tender plants, while all else around was killed. It is best generally to place the covering a few inches above the plants.

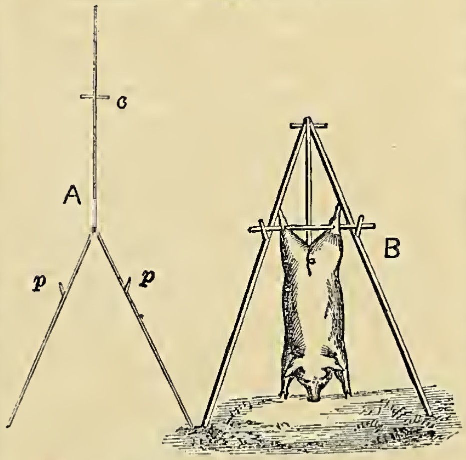
Burning Charcoal in Kilns.

We gave in our last, some account of the common mode of preparing charcoal in raised mounds or pits. This process is not economical of wood, but has in its favor, that the wood can be burned where it grows, with little expense for carting.

A better method for those who have capital, is to build kilns of brick expressly for this purpose. We have occasionally seen these in the vicinity of iron furnaces, where large quantities of charcoal are used in smelting ores. This is the common method in the old iron districts, where wood in the immediate vicinity is becoming scarce. The kilns are built near the furnace, and the charcoal is burned by those who run the furnace, as a matter of economy. Frequently large tracts of woodland are purchased mainly for this purpose. The wood is cut and corded, and after seasoning, is hauled to the furnace. These brick walled kilns are made either rectangular, or circular, according to the taste of the builder. A single wall of brick is strong enough for this purpose. The walls should be run up about nine feet high, and then be arched over with brick. Two tiers of wood can then be set, one above the other, much in the same order as in the common coal pit.

Occasional holes of the size of a brick both at top and bottom, are left for ventilation. This gives the burner perfect control of the fire. The usual capacity of these kilns is from forty to fifty cords, which are burnt in about three weeks. The yield is from fifty bushels to the cord and upward, according to the dryness of the wood used. This is an advantage of about twenty five per cent over the common method. A usual estimate is, that twenty five cords of dry wood, or thirty cords of green wood, will make a thousand bushels burnt in a coal pit. The cost of the process of burning in kilns, including the filling, coaling, and discharging, is about one dollar a hundred bushels. Coaling in the woods can not be afforded short of two and a half dollars a hundred.

With these hints, every one will be able to tell whether it will pay to put up a kiln or not. For men who work iron furnaces, or who have occasion to use large quantities of charcoal in their business, it is undoubtedly the cheaper method of supply. It might also pay farmers who have large tracts of woodland and a good market for charcoal within ten miles.



Suspending Slaughtered Animals.

The simple method of suspending and elevating slaughtered animals, given on page 332 of last volume (Nov. No.) has called forth several other methods. Some four or five have given a plan similar to the one here sketched, the drawings of which were forwarded to the *Agriculturist* by Mr. Sam'l Schooley, of Clinton Co., Ohio. Provide three rails, or better, three round poles, say 12 feet long, or of such length and size as may be required for the animal to be suspended. Lay these down on the ground as shown at *A*. Two of them are to be chamfered off (not shown in *A*,) and the other fitted between them, and the three joined at the angle by a loose pin of iron or strong wood. One or more pins, *p*, *p*, for the gambrels, are to be put into each of the two poles, and a cross-bar, *c*, for a handle into the other one, as shown in the cut *A*. The joining of the three pieces is not well shown in the engraving.

To use the apparatus, lay the frame over the animal, place the gambrel upon two opposite pins, and then raise up the three pieces, as shown at *B*. The apparatus is very simple, is easily made, can be carried from place to place, and be packed away by simply taking out the pin. Mr. Schooley says, a man with a boy, or at most two men, can readily elevate the largest beef carcass.

Protection of Sheep—Tax the Dogs.

[We ask especial attention to the communication below. Let some public spirited individual in each county gather facts and statistics, and the mass of people will be startled at the result. We suggest that every Agricultural Society appoint a standing committee on sheep-killing dogs, to report once a year, or oftener.—Ed.]

To the Editor of the American Agriculturist.

I notice in the current January *Agriculturist* the remark: "*We cannot keep sheep on account of the dogs.*" In many parts of the country, that has been, and is supposed to be an inevitable evil attendant upon that department of husbandry. But there is a remedy and a power in the agricultural community to protect their interests in this most profitable and pleasant department of their industry.

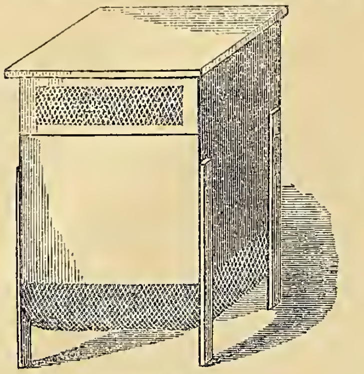
In Massachusetts and Connecticut, laws have been enacted levying a tax upon dogs, of $1 each, and on every slut $5; each dog thus taxed is registered in the Clerk's Office of the town where owned, and must also wear a collar, with the owner's name on it. Every dog not thus taxed, registered, and collared, may be killed by any one. Sheriffs, Constables are required to kill them, or, after request, are liable to pay a fine if they refuse. Any one keeping or harboring an unlawful dog, is liable to a fine of $10. Dogs thus taxed, etc., are protected from destruction under severe penalties. If found destroying sheep, their lives are forfeited, and the owner required to pay all damages. The moneys thus levied, constitute a fund with which to pay for destruction of sheep by dogs undetected. Every State in the Union should have such a law, and farmers must work for it.

Two years ago, having learned that one man in this county had ninety sheep killed in one day by two dogs, and his neighbor $100 worth of Cotswolds (I believe,) at the same time, and by the same dogs, with the assistance of a few gentlemen, in different towns of Southern Berkshire, I commenced gathering facts. I had reliable information, from farmers who had suffered, that in this half of the county, in the five preceding years, dogs had destroyed sheep to the value of *two thousand five hundred dollars!* Men were incredulous when I told them this, until I showed them the items and names. These were laid before a full meeting of the Housatonic Agricultural Society, and a vote passed, unanimously, requesting our Legislature to pass a law similar to the one now in force. After this the Massachusetts State Society took the matter in hand, and, in consequence, the first enactment was modified, and made more efficient. The result has been very satisfactory; the law works well.

According to ascertained facts, the farmers of Berkshire County suffered a loss of *one thousand dollars annually* by the ravages of dogs among their sheep. Still the evil had existed so long, that many thought there was no remedy, and some who had sheep killed, even in the sheds, only a few days before my requesting the particulars, neglected to answer my letters. Farmers in the Legislature were afraid to take hold of it at first, from fear of unpopularity, and only when influenced by a strong public opinion and numerous petitions, did they move.

All I have to say to my brother farmers is, go to work by circulating petitions to your Legislatures: and, if need be, gather up facts, to show the reasonableness of the demand for protection, and refer to the enactments of Connecticut and Massachusetts as good precedents. It may cost a little time and trouble, but it will pay well if you wish to raise sheep. Then a good flock, with good care, will yield a good profit.

Berkshire Co., Mass., Jan., 1860. F. Whiting.



Transporting Bees.

Large shipments of bees have been recently made to California, and the demand for the Pacific Coast, as well as down the Atlantic, and other distant points, is increasing. Several inquiries have been addressed to us for information, as to the best mode of preparing them for transportation, when to be carried over the water, and especially when to be subjected to a change of climate in passing through the tropics. We can not better answer these queries, than to give the accompanying illustration, which we sketched from one of a lot of hives, passing through this city on its way to California. The hive was of the common box form, having drawers at the top. A narrow strip of board was nailed upon each of the four corners, which projected down about six inches below the bottom of the hive, to form temporary legs. Over the open bottom of the hive a sheet of wire-cloth was nailed, its edges being bent up, and tacked to the edge all around. This formed an open-work box, hanging down some four inches, or within two inches of the bottom of the temporary legs. The drawers were removed, and wire-cloth nailed over. This arrangement secures free ventilation, and access to air and light, without allowing the bees to escape. When carried on land, the hives were turned bottom upward, but when taken on shipboard, they were set in their natural position. We learn that by this arrangement there has been little loss among the hundreds of swarms that have gone to California during the past four months.

For the American Agriculturist.

How to Raise Turkeys.

One of the grandest sights about a farm house in the Fall of the year, is a noble flock of turkeys. What lordly struttings of the old gobbler, raking the ground with his trailing wings, making broad his caudal phylacteries, and ejecting wind from his swelling breast with the fierceness of a locomotive? What gobblings of his eldest sons, as they ape the manners of the father, and essay to lead the flock afield! What iridescent colors glow upon the glossy feathers of the whole flock, as they pick their morning meal! The noblest of all birds in the farm yard, or upon the table, the turkey should become a universal favorite, wherever there is room for him to follow his native wandering habits. Though as thoroughly domesticated as the common hen, they can not be confined to as narrow quarters with profit. It is only upon farms where they can have a good range, that they can be raised to advantage. No kind of poultry pays a larger profit, as the most of the food is gathered from the field, and the price is always high. Farmers in Connecticut and Rhode Island pay a good deal of attention to this crop, and market it mainly in Providence and Boston. Two hundred turkeys, worth three hundred dollars at the door, are frequently raised upon single farms.

No State excels Connecticut in the size and quality of its turkeys, and a few hints from the note books of some of our best poultry raisers will be acceptable to your readers. This is about the time, when these birds begin to think of their future broods, and if not already done, the breeder should immediately make

A Selection of Stock. Two years old birds, both male and female, are to be preferred, if you desire fowls of the best quality. The males should weigh twenty-five pounds and upwards, and the females not less than fifteen pounds. By careful selection, a few breeders have originated a variety of large bronze turkeys, the males of which at maturity weigh thirty-five pounds and upward. Other things being equal, the larger and stronger the stock, the more and better birds the breeder may expect to raise. The hens of a year old will lay earlier, but they will not produce so strong chicks.

Nests.—Though the hens are prone to stray off and steal their nests in woods and retired places, they may be induced to lay in more convenient spots, by preparing nests for them. Some build these of small stones near the fence by the road side, covering the top with short boards, to shed rain, and throwing over them a handful of brush, to screen the hen from observation. The more rude and inartificial the nest, the better. An old flour barrel answers a very good purpose, leaving out one head. The barrels should be put in some quiet place, not too near each other, where the mothers will not be disturbed. The nests may be made of old hay or straw, with a lining of forest leaves. A few tobacco stalks, or refuse tobacco of any kind, will guard the nests against lice. To entice the hens into the nests, put in hens' eggs, or artificial eggs made for the purpose. As they begin to lay before the hard frosts are over, the eggs should be carefully carried into the house, and be kept in a cool, dry place, until they are ready to set. Eighteen to twenty eggs make a nest full for setting. To guard the mother against skunks, minks, and other night walkers, put over the mouth of the barrel a lattice work of laths, removing it every morning.

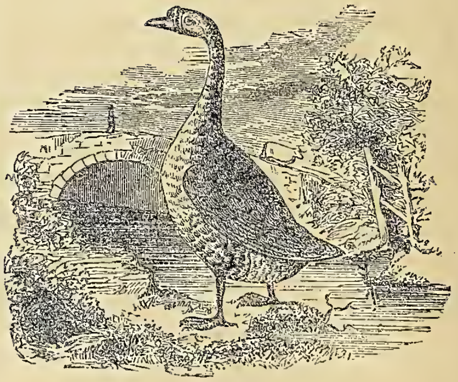
Feeding.—This is a matter of great importance. The first day after hatching nothing is needed, and the lattice cover may be kept over the barrel, to keep the mother at home. The second day the young birds may be put into a pen, made of four boards, about eighteen inches wide and fourteen feet in length, leaving the mother free. This board pen will confine the young ones, until they are able to jump over it, when it will be safe to give them more room. The pen should be moved every fourth day, to give the young a chance at fresh grass. For the first week boiled eggs, chopped up fine, and angle worms broken up small, are the best food. After this, curds may be given, and very coarse corn meal. It should be ground for the purpose, more coarse even than hominy. This may be scalded and mixed with sour milk, and a little sand or gravel thrown in, to prevent it from baking in the crop. Many young turkeys are killed by a too exclusive diet of Indian meal. As the young ones grow, they may be fed with buckwheat and other grains.

After they begin to range, care must be taken to house them in cold, stormy weather. Confine them in the barn cellar, or upon the barn floor, where they will have plenty of room. If any of them get chilled, and droop, they should be put in a basket with wool or cotton, and set near the kitchen fire, where they may feel the warmth.

As they grow and begin to shift for themselves, roosts should be provided for them in some place safe from the attacks of vermin. A common roost is a scaffold, made by putting poles upon crotched sticks, ten or fifteen feet high. The poles should be three or four inches in diameter, that they may be easily grasped with the claws. They should be brought up regularly every night to the roosting place, and fed there. The young ones should have a rough pole, extending from the ground or fence to the top of the roost, on which they can walk up, until they are strong enough to fly. After a few days of schooling, they will come home regularly, and go to their places without any oversight. After a month or two, they will forage for themselves, mainly living on grasshoppers, and such insects as they pick up in the fields and woods. The night feeding, however, should be continued, to induce regular habits.

Second broods are sometimes raised, but where the first has been successful, the practice is not advisable. Any surplus eggs of the first laying may be set under hens.

CONNECTICUT.



For the American Agriculturist.

Chinese Geese.

There are at least three varieties of Chinese geese which have been imported into this country—the Brown red-legged, the black-legged, and the White. The first two are identical in the color of their plumage, and must also bear close affinity to the larger specimens which are known under the name of Hong Kong.

The prevailing color of the Chinese goose is a lightish brown; the different shades are very harmoniously blended, and are well relieved by the black tuberculated bill and markings of deeper tints of the same color, and the greyish white of the abdomen. Slight variations occur in the color of the feet and legs, some having them of a dull orange, others black; a delicate white stripe of finger-like feathers is occasionally seen at the base of the bill. These peculiarities are said to be hereditarily transmitted. But the White Chinese goose, if it be not specifically distinct, is a variety so decidedly marked, as to demand a special notice hereafter.

There is something in the aspect of the Brown goose—its dark brown stripe down its neck, its bright eye, its harsh voice, its ceremonious strut, and its affectation of seldom being in a hurry, all which seem to say it came from China. If it did originally come from China it has no doubt been domesticated for many hundreds, or perhaps thousands of years. This beautiful bird in its shape and motions in the water much resembles the swan. It is also like the swan in other respects; it glides through the watery element with its neck beautifully arched, its head drawn in, its breast just settled in the water, its tail a little raised, giving a light and airy appearance, moving on the water with apparently little or no exertion, and we may say, exhibiting

> "In all her actions dignity and grace."

The notes are loud and shrill, and are uttered often when a stranger or enemy appears. It is still more watchful than the Hong Kong or African goose. Nothing can stir about the premises in the night but it sounds the alarm. No watch-dog could guard the premises with more vigilance than the Chinese goose.

Although a native of a warm climate, this bird appears very well naturalized in this country. It seems to stand the severe cold of our winters as well as the common goose. The only or greatest objection to them is their early laying, which often occurs in the dead of Winter. The writer once possessed an imported Chinese goose which commenced laying in the month of November, and did not cease until she produced over forty eggs. We have never known them to show any disposition to sit after the Autumnal laying. If liberally fed with oats, boiled potatoes, etc., the Chinese goose will, in the Spring, lay from twenty to thirty eggs before she begins to sit, and again in the Autumn, after her moult, from ten to fifteen more.

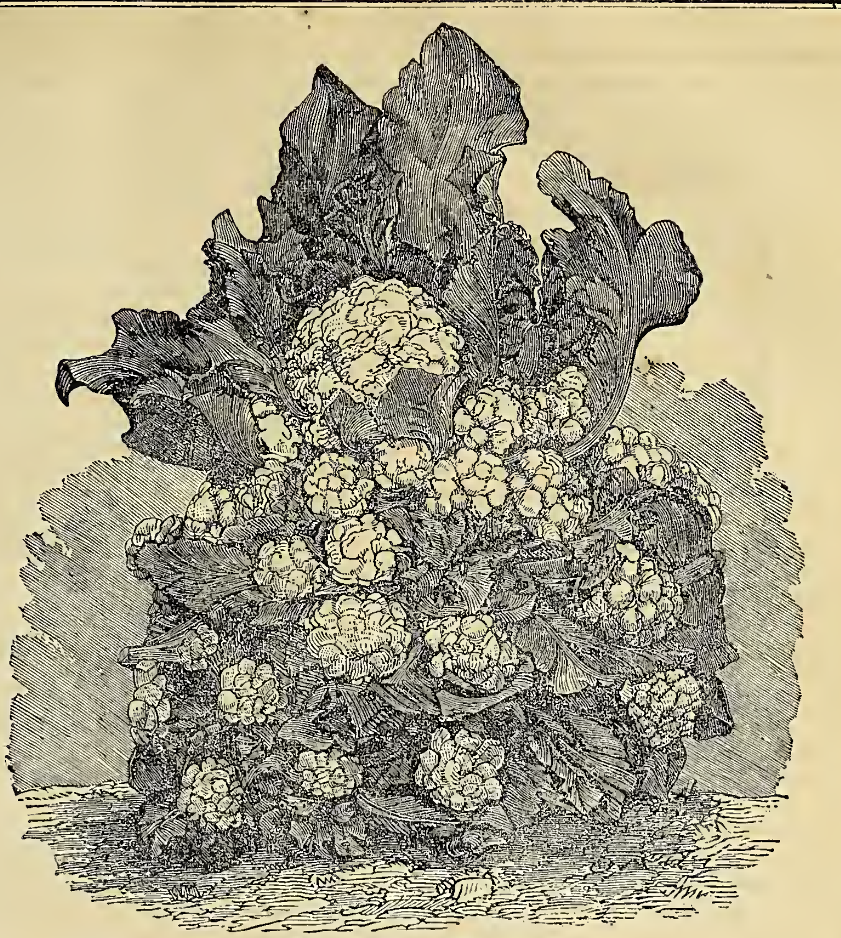
They are smaller in size than our common geese, and what they lack in size they make up in prolificness. They are valued for their beauty, their early breeding, and aptitude to fatten. They couple and breed with the common goose. Hybrids between them and the common goose are prolific *with the common goose;* the second, and third cross are much prized by some, as producing finer birds and of much better flavor; and in many flocks the blood of the Chinese goose may often be traced by the more erect gait of the birds, accompanied by a faint stripe down the back of the neck.

C. N. Bement.

Hungarian Millet for Horses and Cows.

Frequent statements have appeared in the papers, to the effect that Hungarian millet (or grass, as it is called,) when fed to horses, produces stiffness of limbs, and all the symptoms of "founder." We recently, (p. 9, Jan. No.) expressed a doubt as to any such injurious result from proper feeding. In a recent communication to the *Agriculturist*, a Vermont correspondent, Mr. H. Griffin, sustains this view of the subject. He writes in substance as follows:

"I think more horses are injured by a want of Hungarian millet, than by the use of it. I have kept horses and cows upon the hay left after threshing it. They eat it better than herds-grass, and the cows keep in better condition, than on other hay. If horses are allowed to eat it with the seed on, they will be likely to leave the hay, and the effects will be the same as feeding them *exclusively* upon other grain, as oats or corn. The seed weighs some fifty pounds to the bushel, and is very hearty. I think a tun of the hay, cut before the seed is ripe, is better than a tun of coarse clover or herds-grass. We can raise twice as much Hungarian grass, as we can of the common grasses, and it succeeds on sandy land, where other kinds fail. I sowed a piece in May last, on pasture land, and the yield was 3½ tuns per acre before threshing. It gave thirty bushels of seed per acre. I think it would be a good plan in improving upland meadows, to plow and sow with Hungarian millet, and seed with Timothy, mowing the Hungarian the first season, and the Timothy the next."



A NEW VARIETY OF BROCCOLI.
(*Engraved for the American Agriculturist.*)

The Cabbage Family.—(*Brassica.*)

A person who did not know *cabbage*, would be a curiosity, yet very few are acquainted with its first cousins—the Cauliflower, Broccoli, Brussels Sprouts, etc. It will be new to many, that it even has such near of kin—we hardly call them "blood relations," for that affinity belongs peculiarly to beets. But there are intimately connected with the cabbage quite a number of individuals, more refined, and more acceptable visitors at the dinner table where they are in attendance, than the familiar cabbage itself. All of these are descended from a common source, the progenitor of this important family being none other than that very humble, and in itself useless plant, the wild cabbage, found growing among the cliffs of Devonshire and Cornwall, in England. This unpretending wild cabbage, in deference perhaps to its distinguished progeny, is dignified with the high sounding, aristocratic, botanical title of "*Brassica oleracea.*" Viewing a large Drumhead Cabbage, one would hardly suspect it to be of such parentage, for its ancestor has no head, being only supplied with small buds and flowers.

The products obtained from this original plant, are among the striking illustrations of what may be obtained by long cultivation—with vegetables as well as with men—that which was a worthless bud only, is developed into a comely form, of great size and great value. Thus, after long schooling in the garden, the straggling wild cabbage is taught, so to speak, to close its buds as in *Brussels sprouts*, to expend its force on the terminal (end) bud to form *Cabbage*, or to combine its flowers into compact clusters and become the succulent Broccoli, or Cauliflower. Without dwelling upon the mode of producing these varieties, we will only speak now of

Broccoli.—This is cultivated like a cabbage, and has a stem much like it; but instead of the head, it sends up a stalk, upon which are long narrow leaves, somewhat straggling. Above these, upon the top of the stalk, grows a warty bud, about the size of the fist, or larger, which consists of the flowers and their stems compactly united. These little heads resemble cabbage in taste, and are cooked similarly, but they are more tender, and of more pleasant flavor. There are two varieties of broccoli, called the purple and the white, from their color.

A New Variety of Broccoli.—A few years since, a single plant of the white broccoli was noticed in England, which differed quite curiously from the ordinary mode of growth. In addition to the single stalk, terminating in a small head, as above described, this plant threw out numerous lateral or side stems, each of which produced a head of its own. The accidental variation was what is called by gardeners, a *sport*. Seed was saved, and sown during four successive generations, and all the plants produced, have shown the same variation from the original form; whence it is concluded, that the sport was in earnest, and a new and permanent variety was secured. The Gardener's Chronicle, of London, gives an engraving of one of the plants, which we re-engrave, as shown above. It is claimed that this is more valuable than the common sort, because yielding more heads. If it fulfils the expectation of English gardeners, it will prove a valuable acquisition. We shall keep an eye upon it, and if it succeed, make an effort to obtain seed for introduction here, as soon as our friends in England produce enough to spare us a little.

Wonderful Yield of Cabbage.—S. M. Osborne, Shiawasse Co., Mich., writes to the *Agriculturist* of raising cabbage last season *at the rate* of 87 tuns per acre! It should perhaps be stated that the plot was small, containing *one* plant—the remainder of the crop, like other great results we read of, was—*on paper*.

How Tobacco is Grown and Prepared for Market......II.

(Continued from page 47)

Field Culture.—After the plants are set, some will be cut off by worms, and some will die from transplanting. New plants should be put in the vacancies as fast as they are made, until about the tenth of July, after which it will be too late for them to mature. To hasten the growth of these late set plants, it is a good plan to give them some extra manure. A mixture of three parts guano to one of plaster will be found to aid their growth. Some apply this in the drills before the plants are set, at the rate of about 500 pounds of guano to the acre. After being strown in the drill, it is covered by throwing up a light furrow on each side, and the plants are then set upon the ridge. If this is not done in the first preparation of the field for planting, the dressing may be applied at the first weeding, about ten days after the plants are set, covering it with the hoe.

The tillage of this crop is much like that of corn, only that it will not bear neglect as well. In the first and second hoeing, the ground should be deeply worked between the rows, to make a mellow bed for the roots to penetrate. The horse-hoe or cultivator should be kept moving as often as once in ten days, until the leaves are so large as to interfere with the operation. Many cultivators only hoe three times, but no crop pays better for a frequent stirring of the soil. Not a weed should be suffered in the tobacco field, if a prime crop is desired.

Enemies.—One would suppose that so disgusting a plant, and especially one so destructive to animal life, would be secure from the attacks of insects; but no crop suffers more from the depredations of these robbers. No sooner is it set, than the cut worm commences his work near the root, and the supplying of new plants forms a large item of labor upon many plantations. One of the best remedies for this enemy is plowing the previous Fall or Winter. This brings up a multitude of the larvæ from their Winter quarters, and the frost makes quick work with them. If this has not been done, there is no remeedy but to watch for and destroy them by hand.

The tobacco worm, that preys upon the leaves of the plants, is the larva of the Sphinx Carolina. The butterfly is "ash grey; fore wings have blackish wavy lines; hind wings whitish in the middle with four black bands; on each side of the abdomen are five orange colored spots; the tongue excessively long; wings expand about 5 inches." The larva is a disgusting looking green worm, transversely wrinkled, with seven oblique white lines on each side, and a rust colored caudal horn; generally known as the tobacco worm. These insects transform so deep in the ground, that the plow does not usually disturb them. There is no remedy but the thumb and finger. They are exceedingly voracious, and ruin the crop in a few days, unless they are destroyed.

The crop is also liable to be injured by high winds and by hail, when it is in its most succulent state. In some localities, it is liable to be frost bitten, which makes an inferior article. It is more liable to damage from the elements than almost any other crop.

Pruning, Topping, and Suckering.—The object aimed at by the tobacco grower is, to throw all the energies of the plant into a few large leaves. For this purpose, its natural habits must be interfered with, in several respects. As the plants approach maturity, they throw out on the top a blossom bud called a button. This must be removed soon after it shows itself, together with such small leaves as can not be fully developed. The place where the seed stem is to be broken off, depends somewhat upon the strength of the plant. About six inches from the top is the rule; more, in the cases of small late plants, and less in the more vigorous. The number of leaves a plant will mature, will be readily learned by experience. They run from six to twelve leaves in common fields.

A shoot is thrown out at the foot of every leaf stalk, which must be very carefully removed. This throws the sap into the leaves, and expands them. These operations strip the plant of all superfluities, and the field presents a goodly array of long broad leaves, upon stems from two to four feet high.

Cutting up and Housing.—It takes about three months from setting the plants, to mature a crop. They begin to assume a spotted and yellowish appearance, the velvet pliability of the growing leaf is lost, the veins become swollen, and the leaf breaks easily and with a clean brittle fracture upon the under side. It seems full of sap, and thickens up in texture. This is a critical time with the crop, and demands the closest attention and activity of the cultivator. The value of the tobacco depends upon its undergoing a peculiar fermentation, as it dries slowly in the shade after cutting. Dried in the field, it is worthless, and over ripe plants make an inferior article, however skillfully cured. The fermentation gives a peculiar color to the leaves, which depends somewhat upon the stage of growth at which they were cut, and upon the skill in the curing process. The color preferred, is some shade of cinnamon, though fashion changes somewhat with this, as with other articles of luxury.

All the plants do not reach a uniform maturity, but it is best to take them all clean in the cutting, as the scattering plants are more liable to injury from the sun, the winds, and the rain. When the majority of the plants reach the desired maturity the harvest should begin immediately. The plants require very careful handling, as the midribs of the leaves when ripe, are brittle, and the substance of the leaf itself is delicate. The midday sun, if it fall upon the wilting plants, will often hasten the fermentation, and change the color so as to spoil the article. In clear hot weather, the plants should not be cut until two or three o'clock in the afternoon. After cutting, the plants are turned occasionally, and with great care. None but trusty reliable hands should be set about this work. When the dew falls, the plants are put in small bunches of three or four together, and thus left over night. Plants cut just at evening, may be left untouched until the next day at 11 A. M., when they are turned over, and after the sun has had time to dry off the moisture, they may be carried immediately to the shed. The plants cut earlier in the day, and laid in heaps for the night, should be opened as soon as the dew is off, and when thoroughly wilted, or at any rate before 11 o'clock, they should be housed. Every plant should be handled by the but. Any fracture of the leaf is a serious damage, and puts it into a lower grade in the assorting. There is a good deal of difference between five and thirty-five cents a pound, on which the cultivator should keep his eye in the

Tobacco Shed.—In the South, fire is much used in curing. In the North, the sheds are so ventilated that no fire is needed, and a better article is secured. Success depends almost entirely upon the completeness of the ventilation, which should not only be vertical, but at the sides. The usual plan in Connecticut is, to have a building twenty four feet wide, to give room for two tiers of twelve-foot rails, or poles. The tobacco is hung upon these rails in tiers one above the other, about five feet apart. The building is made high enough to accommodate three, or at the most, four of these tiers. The tobacco poles are supported by joists or beams, five feet apart, at the sides and in the middle of the building. The siding of the barn runs up and down, and every third board is furnished with hinges. Ventilation is also provided for at the bottom, either by raising the whole shed a short distance above the ground, or by having doors swinging vertically on each side of the barn. The lower tier of drying plants should not come within three feet of the ground. The roof, also, has a ventilator extending the whole length of the ridge, and made with valves something like a window blind, so as to furnish air even in showery weather. The leading idea of the whole establishment is, to carry off the moisture of the plants as fast as possible without artificial heat. The roof must be made rain proof, for the plants are greatly damaged by wetting after the drying has commenced.

The number of plants that can be dried properly upon a twelve-foot rail, depends upon their size. The largest plants, say from four and a half to five feet in length, should have from ten to twelve inches space, or from twenty four to twenty eight plants to a rail. Four-foot plants will go from thirty to forty to the rail, and the smaller plants about fifty. The curing of tobacco, either with or without fire, is an art that can only be learned by practice. It requires skill and good judgment that can not be communicated by the fullest description. We will only add further, that in the most drying weather, with a clear northwest wind, it is advisable to close the ventilators on the windward side, and in rainy weather, they should be closed up tight. As the air drying process makes the best article, we give no directions for curing by artificial heat—these may be found in the *Agriculturist* Vol. XVI, p. 54.

After the curing process in the sheds, which takes two or three months, the leaves are stripped, assorted, and packed for market. As the preserving of the leaves *whole*, is a matter of a good deal of importance, damp weather is selected for this purpose. When the stem is thoroughly dry, the leaves may be safely packed. Tobacco once hanked too wet can not be dried, and if boxed up too damp it will spoil. Three grades of tobacco, and sometimes four, are made in the assorting; perfect wrappers consisting of the best; imperfect wrappers consisting of large broken leaves and the smaller ones; and the balance for fillers.

Planting Sorghum.

A subscriber writes from Morgan Co., O., as follows. "I am gratified with the encouraging reports on sorghum. I have manufactured three small crops with very good success, and at the same time gained some valuable experience. I would recommend to all intending to plant the coming season, to secure good seed, which is now plenty,* and use it liberally. Better have a quantity to pull out than be obliged to plant the second time. I find it does well at three feet apart each way, with five canes in a hill when well suckered. The ground should be finely pulverized and in good condition. The planting should not be done until the ground is warm, say in this latitude from the 6th to the 10th of 5th Month, (May)."

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*There is considerable inquiry for good seed, which does not appear to be plentiful in this market. Those who have a supply of really good seed, should advertise the fact, stating price, etc.—Ed.]

An Interesting Letter from Abroad.

Fish Culture—Napoleon's Horses—A new Plant for some Speculator—Asparagus in Sand—Pears in France—French and English Nurseries—Trees sent abroad and reimported at a higher price—Horticulture in England—Various Objects of Interest in England, etc.

[Our readers will be interested in the varied information contained in the following letter from Samuel B. Parsons, who has been in Europe for more than a year past, gleaning information, and collecting new plants, not only for his own establishment, but for our Government, the Central Park, etc. The letter was a familiar one to his brother, not designed for publication, but we have begged the privilege of giving the following extracts.—Ed.]

"....I have thus found every day something to convince me that under this 'one-man-power,' there *may* be a concentration of effort in the development of great resources and investigations in physical science which is almost impracticable with us. In the United States, innumerable jealousies are always awakened by any attempt of Government to develop particular interests, and all our advance must be the result of private enterprise.

Some few years ago the Brothers Remy discovered a mode of propagating fish artificially, and with so great facility that their ponds were soon filled. On learning the facts, the French Government at once placed in their hands the means of extending their experiments, and is now erecting a large establishment near Basle. Receiving a note a few days ago from Dr. Coste, that he would be at home on a certain day, I called upon him, with Mr. Bigelow of the Evening Post, who always has a ready enjoyment and appreciation of such things. Dr. Coste is a professor in the College of France, and is educating a class of young men in all the mysteries of *pisciculture*, (fish culture). His laboratory was very interesting and full of specimens in all stages, from the eggs packed in moss as they arrive from a distance, and those in process of hatching under running water, to the living and swimming fish.

This laboratory of Dr. Coste is simply a means of illustration for the scholars. The establishment at Basle, which I visited in September, is far more extensive; there, large ponds and brooks shaded by trees, shelter the young fish, while extensive brick buildings are provided with furnaces to give uniform temperature, and long ranges of tanks and troughs filled with running water to receive the eggs and the fish just hatched. From this establishment millions of young salmon will be sent by express to all parts of Europe. Dr. Coste mentioned a singular feature in the habits of the salmon which is of great aid to the cultivator. Its instinct leads it, when out in the rivers, or sea, to come back to its own birth place to deliver its spawn. In three months at sea it will grow more than in three years in a pond, and by having a trap to admit of ingress but not of egress to fish of a certain size, the cultivator may always keep his pond full of large specimens grown at sea. This whole subject is one of great interest, and pisciculture would be a source of great wealth to any one in the United States who should now embark in it. There are many details which I can not give here, but which I may one day work up if I ever find myself free from the cares of tree growing and tree selling.

The new stables at the Louvre, are just now objects of interest. Decorated in the Italian style, lighted with gas, cleansed by numerous water jets, and furnished with all the latest improvements, this building affords better accommodation for horses than monarchs enjoyed in old times. One room is 300 feet long and 14 wide, besides a row of stalls on each side which accommodate 82 horses. When lighted up with gas at night, the effect is quite striking. One stable has fourteen stalls for saddle horses; another has ten boxes and a place for washing. On the ground floor are the coach houses, containing more than 60 carriages. Near these are the harness rooms and other offices, while above them are apartments for grooms and others connected with the stables. The number of these exceeds 300, and the most perfect order and military precision prevail throughout. The whole imperial stud and equipage, however, is not here. There are in all, some 300 horses and 180 carriages, a part of them here, and others in the Tuileries and St. Cloud.

I see that Boussingault has just announced a new tubercular esculent called *Schicama*, which grows in the vicinity of Cuenza, New Granada. The plant is a shrub which grows to the hight of three feet, and has at its root two different sorts of tubercles; those nearest the surface are yellow and bitter, and are only used for the propagation of the plant; the second tier, situated much deeper, are white, juicy, and so sweet that they can be eaten raw. It is said to bear cold weather well, and it is thought that if it succeeds here, it will be a formidable rival to the beet root, because it is richer in sugar. So, if any one wishes to make a fortune equal to the profits of one of our neighbors, by the Dioscorea, let him send a special mission to Cuenza.

A French architect writes of growing asparagus successfully in pure sand on the sea coast.

In Horticulture generally, the French are far behind the English. The *Jardin des Plantes* as a garden is very meager; the Petit Trianon is the only good specimen of landscape gardening, while good private pleasure grounds are very rare. Dwarf Pear trees have been planted and grown by millions for centuries, and the French certainly well understand their pruning and culture; yet Pears are scarce and dear. I can not buy any variety fit to eat for less than half a franc each (about 9½c.), and for some I am asked twenty francs each ($3 75). The friends of dwarf Pears may rely upon it that they will never supply our *market* at home with Pears, if the French have not yet been able to do it. Few standard Pears are planted here and consequently the markets suffer.

The nurserymen and florists of France will not compare with those of England. Of the former there are only two or three large establishments, and these not equal to our best American nurseries. I have just returned from a tour of inspection among English nurseries. I examined carefully one which is said to do the largest American trade. It possesses large specimens of some of the rare conifers, like *Picea Nordmaniana* and *P. Nobilis*, of which, trees 30 inches high command readily five guineas, $25—a price which no one would pay with us. In general stock, however, and in assortment, it will not compare with the best American nurseries. In ornamental trees and shrubs alone, the species and varieties cultivated are not in number more than one half of those to be found in the nurseries at Flushing. In obtaining new stove and green-house plants, the connection of England with the East gives her nurserymen many facilities, but the prices demanded for some of these new things is almost fabulous. One variety, six inches high, is now offered at the price of ten pounds ($50) each. The prices in England are well sustained, while they have been much reduced with us. I am certain that purchasers can buy almost all the varieties of Fruit and Ornamental Trees to much greater advantage in America, than to import from England or France. I found, for instance, our new *Picea*—which Barron at Elvaston Castle says is the finest conifer known, and which we sent to England at 14 shillings sterling ($3 50 each)—selling at a guinea ($5) by houses in the American trade, and the identical plants we sent over have doubtless gone back to America with a profit charged on them of some 50 per cent.

The English nurserymen gladly avail themselves of this prejudice in favor of things from a distance, and smile in a quiet way when they speak of it. They deserve much credit, however, for their enterprize which is much aided by such establishments as Kew, and the London Horticultural Society. No private house could afford to employ such travelers as Sir Wm. Hooker and Robert Fortune, and to such are due some of the finest things which have been introduced. Among the collections sent home by a botanist are always many things possessing no beauty except to a man like himself. An American will therefore never be able to order safely without seeing.... I endeavored to see everything, and shall take home with me all the ornamental trees and plants which I consider of any value. You may rely therefore upon having an American collection equal to any in Europe.

England possesses great interest for one who is fond of horticulture. Its rural life is unequaled in any country. The beautiful turf, the numerous evergreen plants and trees, and the high cultivation everywhere, make a tour in England charming beyond description. If you want ruins, you can go to Kenilworth, where an arch reprobate feasted his royal Mistress with almost oriental magnificence. Warwick Castle will give you a good idea of the baronial style of living in feudal times, and with your puny strength of modern days, you may try lifting the sword which Guy of Warwick wielded like a feather.

If you want a union of noble stretches of soft turf, fine old trees, and the most charming ivy covered ruins you ever saw, go to Fountain's Abbey, and see how luxuriously the old monks lived. The impression left on my mind by this delightful old place can not well be described. It fully met all my conceptions of beauty in nature, antiquity, and art. If you would like to see a fine old place, you should go to Blenheim—that gift of the Nation to Queen Anne's favorite warrior—him with the stormy wife. The present Duke keeps up the place well, and its extent gives it a grand character which I found no where else. The vistas are very fine, the trees are of great size, the walks are full of fine curves, and tastefully flanked here and there with evergreens, while a large sheet of water completes the charm. Trentham, the seat of the Duke of Sutherland, is celebrated for the extent of its fruit, forcing houses, and walls. I found Mr. Henderson the gardener full of intelligence, and like Mr. Thompson, of Dalkeith Castle, evidently enjoying his profession.

Elvaston Castle, however, is the most wonderful place for rarities of great size, and for all sorts of beautiful things. I could fill a dozen pages with details of its various attractions, and therefore will not commence.—I intended to have written about some important discoveries I think I have made in vine culture, which, if verified by American experience, will diminish one half the expense of forming vineyards. But I will leave it till I return home...."

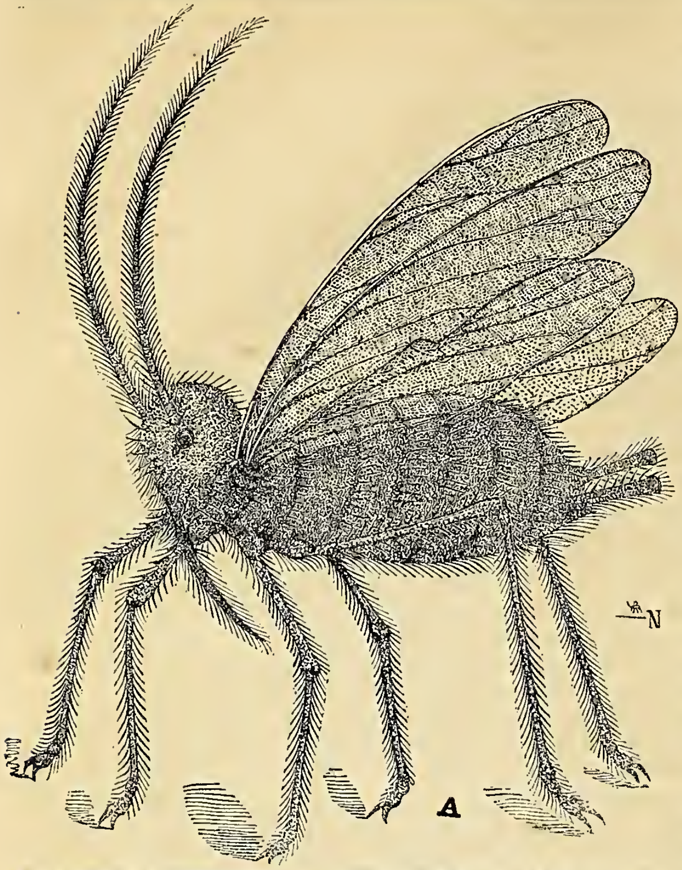

Fig. 1.—ROSE LOUSE (*Aphis rosæ.*)—The perfect insect as it appears under the magnifying glass.—*N*, Natural size.

Microscopic Views of the Insect World.—I.

BY MRS. CHARLOTTE TAYLOR.

[Note by the Editor.—We are happy to present to the readers of the *Agriculturist* the first of a proposed series of original articles, giving a description of the habits and characteristics of various insects, with suggestions for their extermination, etc.; together with new illustrations taken directly from the insects themselves, and prepared expressly for this journal. We take the more pleasure in this, not only because the subject is one of great interest and importance to every cultivator, but also because we are thus contributing to bring more prominently before an American public the original investigations of an accomplished and indefatigable student of Natural History, whose labors although they have long been highly valued in Europe, have not hitherto been sufficiently known and appreciated in her own country.

A glance at the illustrations given in this number, will indicate something of the interest connected with this subject. We find our rose bushes sickly and dying, and at first wonder what can be the matter with them. A close inspection reveals the fact that the leaves are infested by a vast number of minute insects, scarcely larger than the speck shown at *N*, fig. 1, and hardly perceptible to the eye. Catch one of these insects, and place it under a powerful magnifier, and there stands forth the huge animal shown at *A*, as perfect in all its parts as an ostrich or elephant, and more beautiful to look upon. And yet this insect, small as it is, is really a monster in size, when compared with an infinite number of other insects that abound everywhere in nature. Not one in a million of the living animals that literally swarm through the vegetable kingdom, has ever been seen by the common observer. Nor has even the microscope shown a point beyond which there are not still smaller animated beings. Our ideas of size are all relative. Said a friend recently: "If during some night, all things around us, including our own bodies, were contracted into one-half the present size, the change would not be noticed by us—no, nor even if contracted, or expanded, a million times." The insects which appear so small to us are only relatively so. The mind fails to conceive an animal so small that there can not be a smaller one. But enough on this point now. Entomology, that is the study of insects, is coming to be of vast importance to cultivators. It is beginning to be discovered that by the ravages of these unseen depredators we are losing a large percentage of all our field, orchard, and garden products. As the forests and wild plants decrease, the innumerable hosts of insects attack the cultivated plants. We leave our contributor to show to the reader some of the wonders with which, by the aid of her artificial eyes—her microscope—she is daily conversant :]

THE APHIS ROSÆ (*Rose Louse.*)

This insect, I presume, is familiar to every one, for the annoyance it gives, if not for its odd and extraordinary habits. It is quite as much of a phenomenon now as it was more than a century ago—when *Réaumur* announced at a sitting of the *Académie des Sciences*, at Paris, the wonderful discoveries of Bonnet. It belongs to the second family of *Hemiptera*—a family inexhaustible in numerical calculation, as every plant known has one, and many, more than two varieties of this family as inseparable companions. The insect, as it appears under a highly magnifying glass, is shown at *A*, fig. 1. Some idea of the natural size may be gathered from *N*; it is nearly oval in body, about six lines long, and three broad, except when distended with eggs, *B*, fig. 2; it is then almost equal in length and breadth. It has six legs of three joints each, *C*, fig. 3. The antennæ are seven and sometimes nine-jointed Three of these joints are shown very highly magnified at *D*, fig. 3. It has two tubes at the end of the body from which the honey dew is ejected, *E*, fig. 3; and a long proboscis, four-jointed, with which it extracts its sustenance from plants. This is seen, bent under in fig. 1, and a front view is given at *F*, fig. 3. The body of the insect is of a light green color at one time, afterwards fading away to white or straw color, according to its food; the feet and the tip of the sucker are very black.

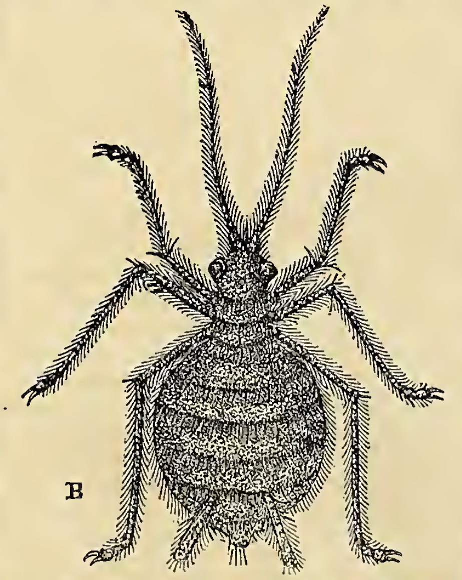

Fig. 2.—Female Aphis, distended with eggs, or young.

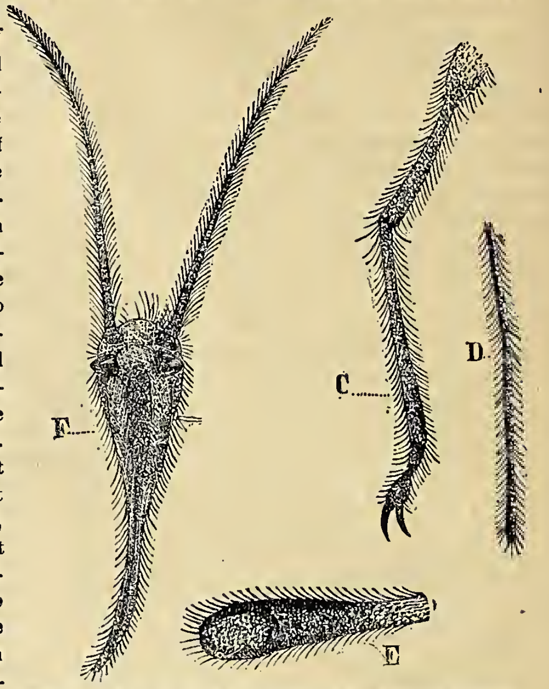

Fig. 3.—*C*, *Leg*—*D*, Last three joints of the *Antennæ* (or feelers)—*E*, *Honey Tube*—*F*, Front View of the *Proboscis*.

When food is scarce, that is to say, when every leaf has been dried of its sap, if one is placed under a magnifying glass it presents the appearance of being made entirely of glass, being quite transparent throughout, but put it on a green leaf, and you may see the sap of the plant circulating through every fibre of its little body. When in health, with plenty around it, it is of a lively green; the legs and antennæ of a pale pink color; and with its brilliant, large, black eyes, it has a very animated and sensible appearance as it travels slowly from vein to vein, luxuriating upon the life blood of the doomed plant.

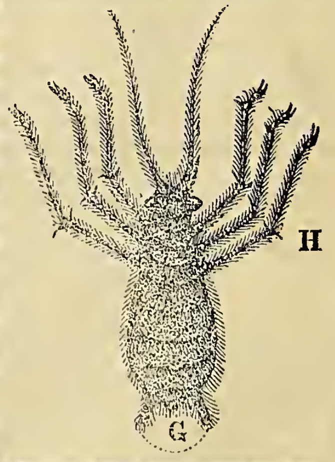

Fig. 4.—Young Aphis before the first moulting—*G*, The two *Honey Tubes*.

Minute as it is, this insect is one of the wonders of Creation, for as far as is known, it stands alone as exhibiting a peculiar phenomenon in this division of the natural kingdom ; for here the naturalist finds the very singular anomaly of *a creature at one time producing young from the egg, as well as the perfect insect* at other times, and *without impregnation*—"*even to the ninth generation*," says Bonnet (a great naturalist of Geneva), who, after much patience and care, discovered this extraordinary fact. He transmitted the results of his experiments to Réaumur, at Paris, who announced them to the Academy. A great sensation was produced among the savans, at least among those skilled in this branch of natural history. At the unanimous request of the members of this Institution, the most eminent living naturalists at that time were requested to follow up this marvelous statement. Accordingly, Bazin of Strasburg, Lyonnet and Trembley residing at the Hague, Bonnet himself at Geneva, and Réaumur in Paris, undertook each separately their own experiments, which were eminently successful upon the louse of the rose, of the poppy, of the elder, and of the willow, (*Aphis rosæ, A. papaveris, A. sambuei, A. salicis.*) The account is too long for extracting, but the result was completely proved, and entirely satisfactory to every one. Bonnet, in pursuing his experiments farther, " secluded an individual Aphis at the moment of its birth, then her progeny, and so on successively, until he saw the fifth generation produced without any intermediate pairing."

I have been successful up to the *thirtieth* generation, and then gave up counting from weariness. In December I placed *one* Aphis rosæ, just brought forth, on a plant of the *Cuphea platicentra* (they are very indifferent what plant they live on,) which was free from insects and healthy. It was in four months literally imbedded in these mites, with not a healthy leaf upon it, and not a male among them all. It is still more extraordinary, that towards the Fall the females lay eggs ; these hatch in six or nine days—these insects, after undergoing four moultings, come out at the last winged. They now pair on the wing, and the subsequent generations proceed as represented above, giving birth to young, which in their turn become parents in forty hours !

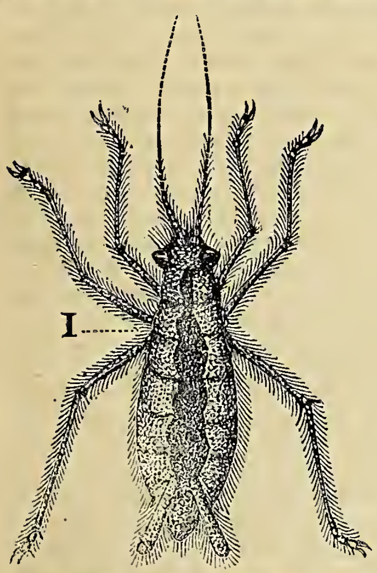

Fig 5.—The first *Ecdysis*, or changing of skin—The young Aphis' skin.

Another singular fact is, that after a female has paired, she is no longer viviparous, (that is, produces no more living young,) but deposits *eggs*. There is no doubt that Aphides breed without pairing, and never pair except when winged. Several entomologists maintained they pair before being brought forth, but this was proved erroneous by Réaumur, Bonnet, and others, for there are no males to be found, except towards the Fall. This is a beautiful provision of our Creator; the eggs can stand any amount of cold or heat, whereas the little pulpy tender creatures are easily killed. Therefore, to secure the certainty and safety of the species, and guard against any emergency, the egg, on the approach of Winter, is substituted for the living insect, and those insects which are dependent upon them as food, are provided for, without fail, by the high and beneficent Power, ever watching over and protecting all His creatures, even the most insignificant.

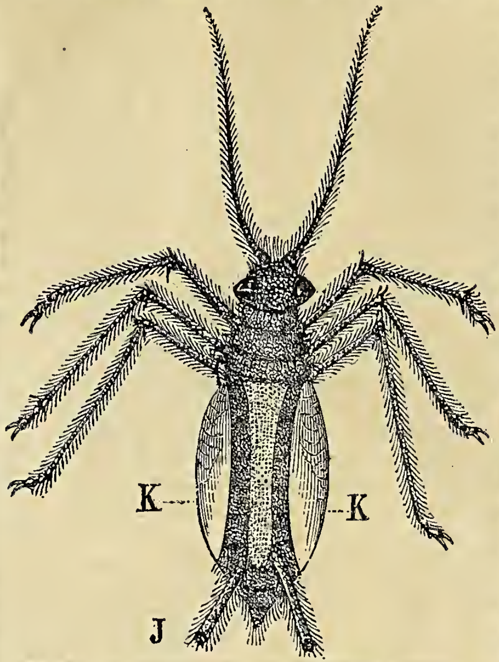

Fig. 6.—The appearance of the Aphis before the last change takes place—*K*, The wing-cases—the green shade being much darker than the abdomen.

If you examine the insect in fig. 4, you will perceive two small tubes, *G*, at the end of the body. These are the honey tubes. If you watch an insect under a magnifier, you will perceive that, as fast as it imbibes the juice of the leaf, it ejects a drop of clear sweet liquid from each tube, which is greedily devoured by the very young, who have not strength to puncture for themselves (unless the leaves are very tender,) until after their first moulting. Their antennæ are always laid flat on their backs during the time they are sucking. Ants are exceedingly fond of this saccharine liquid, and, strange as it may seem, they actually carry off the eggs of these Aphides, to rear them in their own nests, for the purpose of obtaining this beverage. Any fine Summer day you may see the ants standing beside the Aphides on pear and apple trees, soothing and coaxing them with their antennæ, evidently soliciting them to discharge this luxury for their accommodation. These little creatures most good-naturedly attend to their wants, and hungry ants can be seen traveling up to make their solicitations, while those who have gorged themselves are slowly descending on the other side. They live together in great harmony on a leaf, seeming to mutually like such companionship amazingly. I have known the ant after a while to become positively lazy and indifferent to work, and remain all day, sometimes weeks, reveling in his newly discovered Capua. Every one execrates these little torments, but they have their place in creation, and would leave a great blank if exterminated. When at maturity they compose the food of almost every insect of the beetle and bug families. Many birds exist on them, and they are also useful in keeping down too luxuriant vegetation.

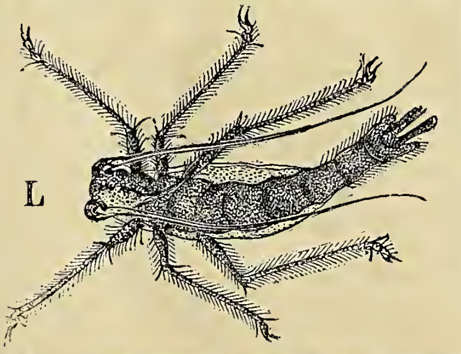

Fig. 7.—The last *Ecdysis*, or change of skin, when it emerges the perfect winged insect, as seen in fig. 1.

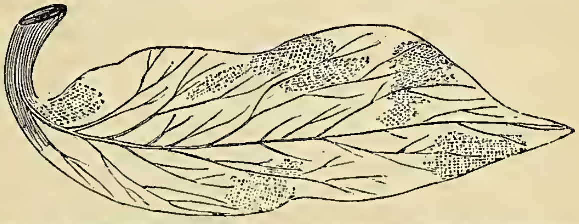

Fig. 8.—Leaf of the *Cuphea platicentra*, with eggs upon it. These are not perceptible without the aid of a powerful magnifying glass.

The best *remedy* for keeping them subdued is to sift very fine wood ashes (dry) over the plant, also on the under side by holding the earth and the plant in the pot firmly, and turning it upside down. In time, the leaves absorb the strong alkaline qualities of the ashes, not only strengthening and improving the plant, but also rendering its sap totally unpalatable to the Aphides. Then again, they have no power to scramble over such mountains as grains of ashes, and their suckers are not capable of penetrating such brick work ; consequently they soon die and the plant is seldom or ever touched by them again. If the dead leaves of the orchard were *all* raked away and covered with lime before the Winter sets in every year, we should hear fewer complaints of destruction by insects, and the manure beds would be greatly enriched. Nature provides food for all her children with a very prodigal hand, and man must learn to protect himself by investigating her unalterable laws, and studying the forces operating for and against him, feeling assured a strong and powerful hand is guiding all things to work for his best good, eventually.

Wash for Fruit Trees—Insects.

Doubtless, if the soil in which our trees stand were well drained, enriched, and tilled, there would be little need of washing the trunks and branches. For this would keep them in such vigor that they would look quite fresh and healthy. And let it be remembered that no scraping and scrubbing will answer as a substitute for other good management. Yet there are insects infesting most fruit-trees which need an occasional good dose of potash or tobacco to keep them humble. One of these is the *Woolly Aphis*—a small fellow, with a sort of downy substance covering and concealing his body, and which acts as a parachute to float him about from tree to tree, when he wishes to travel. He infests both root and branch, feeding on the sap of the inner bark, which he punctures in order to extract his food. He has a special liking for old, rough-barked trees, as their crevices afford good hiding places.

There is also the *Scaly Aphis*, or *Bark Louse*. This is a dark brown, scaly insect, which has a special fondness for the bark of the apple and pear tree; and its color being similar to that of the bark, helps to conceal it. Sometimes they are so numerous as to completely cover the bark; this happens often when the trees are growing in poor and wet soil, and are in a feeble condition.

To exterminate these and any other insects which may infest the bark, begin early in the Spring, and scrape the trunk and large limbs smooth. If they have invaded the roots, the surface soil should be removed for several feet, and new put in its place. Then apply the following mixture with a whitewash brush. Two parts of soft soap and eight of water, or two pounds of potash dissolved in two gallons of water, to be applied in the same way. The scaly aphis should be looked after chiefly in the month of June, when they are young and easily killed. If the insects infest the branches, a painter's, or scrubbing brush may be used, taking care not to touch the leaves or buds.

Preserving Trees from Rabbits.

A correspondent of the London Gardener's Chronicle states that he has used the following mixture to preserve trees from injury by rabbits, or other animals gnawing the bark: 4 oz. soft soap, and 6 oz. flowers of sulphur to a gallon of water, with quicklime enough to bring it to the consistence of paint and some (!) soot stirred in the mixture. Apply it with a brush to the trunks of young trees. The animals, it is said, will dislike the oder and leave the trees unharmed. He also recommends the mixture made thinner, to be applied with a syringe to gooseberry bushes, to prevent birds destroying the buds in Spring.

Wild Pear Stocks.

We see it noticed in one of our cotemporaries, that wild seedlings generally known as perry trees, make the best stocks for Standard pears. Some six years ago, the writer transplanted about one hundred and fifty of them from a pasture into a portion of the garden, and grafted them. They have proved to be exceeding hardy, and remarkably thrifty. The finest trees we have, are from these wild seedlings.

In the older portions of the country where the pear has been cultivated, these seedlings are often found in considerable numbers in neglected pastures, and woods. The Spring is a good time to transplant them. The smaller ones may be grafted as soon as they are set out. The larger trees, three inches or more in diameter, are best transplanted in the Winter, or early in March, when the ground is frozen. Those who have these trees upon their farms, should not suffer them to waste their sweetness upon the desert air. A day or two spent in transplanting and grafting, will yield abundant fruit a few years hence.

King of Tompkins County Apple.

We have now before us some excellent samples of this apple, received from Mr. S. T. Owen, Chemung Co., N. Y. They weigh from 11 to 12 ounces, are globular to conical in form; skin, yellowish, but deeply shaded with crimson red. The color is decidedly in their favor as a market apple. Flesh yellowish, tender, somewhat juicy, and flavor rich, vinous, slightly aromatic, mildly acid and agreeable. So far as cultivated, we believe it has given general satisfaction. We put it in the list as worthy of general cultivation, or a notch higher than it stands in the last Report of the American Pomological Society.

Try Your Hand at Grafting Now.

A word or two for the inexperienced fruit-raiser. Some persons appear to think there is a spice of witchcraft in the operation of grafting; whereas, if once learned, it is as simple as setting out a tree. We know many farmers who will hire some strolling quack to do it for them, paying him largely for the day's imposition, beside spending as much time in waiting on him as would have been required to do it themselves.

The excuse with many is, that they have never learned how, and do not wish to spoil their trees in making experiments. To such, we say, make experiments by the fireside, before Spring opens. Cut your cions and bury them in soil in the cellar. Then search your orchard for a few limbs nearly as large as your wrist, which need removal, bring them into your kitchen or workshop, and try your hand at grafting them.

Do you want the particulars? First; prepare some grafting wax, by melting together equal parts of tallow, beeswax and rosin—or a little *more* rosin than of the others. Have at hand a fine-tooth saw, a chisel or grafting knife, a mallet, and a sharp knife. As *cleft-grafting* is the most common method practiced in orchards, let us try our hand at that. Saw off the limb to be grafted, and pare smooth the cut surface of the end. With chisel and mallet, split open the end in the middle, two inches deep, keeping the cleft open with the chisel until the cion is inserted. Now, cut the cions into a wedge shape at the end, about an inch and a half long [Fig. 1.] having, if possible, a bud at the shoulder of the wedge as at *A*. This bud facilitates the union of graft and stock. The outer edge of the cion should be a little thicker than the inner. If the stock is quite large, two cions may be inserted, [See fig. 2.] and if both succeed (in the living tree) one may afterwards be cut off. In all cases, see that the inner bark of the cion is brought into exact contact with the inner bark of the stock. Now, cover the wounded part of the stock with grafting wax, to exclude air and rain, taking pains to fill the split between the cions, and also along the stock, and the work is done. Where the stock is small, and in "whip-grafting" small trees, and grafting into the root, it is found convenient to use grafting cloth instead of wax. This is made as follows: Get some cheap cambric or calico (at 4 or 5 cents a yard;) tear it into narrow strips an inch wide, and saturate them in the melted wax. Then, after the cions are inserted, wind these strips around the stock until every exposed part is covered. This is quickly done, and it helps to bind the parts firmly together. The cloth will decay by the time the expanding branch requires more room.

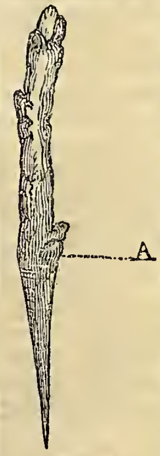

Fig. 1.

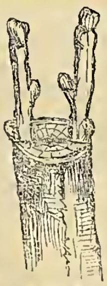
Fig. 2.

Whip-grafting, or tongue-grafting, is much employed on small branches, as also splice-grafting. Saddle-grafting is another mode often used on large stocks. But of these and the hundred and more methods sometimes practiced by the French horticulturists, we need not now speak. Let the tyro practice the cleft mode, by the kitchen fire, until he fully understands it; then, on the opening of Spring, he may confidently try his hand on the best trees of his orchard.

How long do Varieties of Fruit Last?

In our last paper, page 53, in the course of a "Jog in the Fruit Garden," the opinion of certain cultivators was given, that varieties of fruit have only a limited term of existence. Thus: A certain kind of fruit—say the original Seckel pear tree—will live, it may be, only one hundred and fifty years. All buds or grafts taken from it, being only parts or extensions of the original stock, will die whenever the parent tree dies. Every sort of tree has a certain fixed amount of vitality, which it at length uses up, as a garrison does its bread. The most distinguished advocate of this theory, was Thomas Andrew Knight, of London. His own words are these: "No trees of any variety, can be made to produce fruit till the original tree of that variety has attained the age of puberty; and, under ordinary modes of propagation, by grafts or buds, all become subject, at no very distant period, to the debility and diseases of old age."

Mr. Kenrick, one of the earliest pomologists in this country, adopted the same theory. In his "American Orchardist," he speaks of "the fines of the old pears, whose duration we had hoped, but in vain, to perpetuate."......"Except in a few, highly favored situations, these old sorts have become either so uncertain in their bearing, so barren, or so miserably blighted, so mortally diseased, that they are no longer to be trusted," etc., etc. And, it can not be denied that the belief is now widely entertained among fruit growers, (especially pear-cultivators,) that certain varieties have about run out. If they are *not* becoming exhausted, it is asked, why this cracking of the bark and of the fruit, these black spots on the leaves, this stunted growth, this barrenness, and every other sign of debility and old age?

If this doctrine has learned men and many cultivators on its side, so has the opposite. De Candolle, one of the greatest vegetable physiologists of the age, maintains that "varieties will endure so long as man chooses to take care of them, as is evident from the continued existence, to this day, of sorts, the most ancient of those which have been described in books. By negligence, or through successive bad seasons, they may become diseased, but careful culture will restore them and retain them, to all appearance, for ever."......"To say that buds or grafts partake of the age and accidents of the (original) trunk, is improbable, if not impossible, as they can in fact be influenced only by the stock to which they are last transferred." The late Mr. Downing, held the same opinion.* A tree propagated from a bud or graft (which is but a developed bud,) is as much a *new* tree as one raised from a seed, and may live just as long. A seed has been well

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His views were, in substance, these. One cause of disease may be found in our mode of propagating trees. A seedling, unmarred by the saw, or ax, or grafting knife, is longer lived than one of the same variety grafted on another stock. A tree, grafted on a stock closely allied to it, will last longer than one grafted on a stock not so related. For instance, the pear of one variety grafted on another kind of pear, will outlive one inserted upon a quince, or thorn, or mountain ash. An unhealthy stock enfeebles the tree grafted upon it. Weak cions often make weak trees. And last, but not least, soil and climate have very much to do in promoting the healthfulness and longevity of trees. Putting these several considerations together, he finds it easy to account for the apparent decay of many varieties of fruit.

termed, "a primary bud:" it is essentially the same thing, the difference is one only of condition: "*it is the same embryo in different garments.*" A tree may inherit disease or health through the seed as well as through the bud.

But, say Mr Knight and his followers, a tree propagated from a bud bears fruit precisely like its parent, while that from a seed is often different. Yes, indeed, but this is so only with seeds of varieties which have been brought into an artificial state of cultivation. In their natural state, seeds reproduce their parents as faithfully as buds or grafts do. It still holds true, therefore, that trees raised from buds, are not essentially shorter lived than those from seed. They are, in effect, new trees, and have in their nature as good a chance for long life as any other trees.

Now, is it a *fact* that any of our varieties of fruit are running out! Two of the "abandoned, nearly extinct" apples of which Mr. Knight spoke, were the "Nonpareil" and "Golden Pippin." Instead of dying out, as they ought to have done, according to his theory, thirty or more years ago, they are still thriving in perfect health, and are among the most popular apples in England. So too in our country. Many causes have conspired to bring barrenness, disease and death into our orchards; but, after all, none of our fruits are becoming extinct or worthless. Take the old Autumn Bergamot pear, supposed to have originated full two thousand years ago: it ought to be dead and forgotten, according to Mr. Knight, whereas, it is as hale, hearty, and productive as ever, in all our gardens to this day. The old Virgalieu, or White Doyenné, has certainly got into a bad way of late, in many quarters, cracking and becoming spotted and nearly worthless. By some sanguine cultivators—and Mr. Downing among the rest—it was thought that this was owing chiefly to exhaustion from the soil of the elements required by the pear. But the sickly Virgalieu has since been treated with virgin soil, and with "lime, wood-ashes, bone-dust, and blacksmith's cinders, along with barn-manure," according to the prescribed formula, but the patient has not generally got well. Yet, as if to show contempt of all sorts of theories and prescriptions, it has been sick and well for many years just as it pleased. We have seen it robust and fruitful for a period, then pining for a few years, and then, without any change of place, or soil, or treatment, it has become productive and vigorous again. During last Summer, it bore very fine fruit abundantly in some parts of New-York.

Still, undoubtedly, as a general rule, the decline of some of the older varieties of fruit is owing to exhaustion of the soil, and to other kinds of wrong treatment to which we have alluded. Give us good, strong soils, keep the ground in fine tillage as far as the roots extend, wash the trunk and limbs with a solution of potash and water, to keep down vermin, and healthy trees and good crops of fruit may be expected with an ordinary degree of certainty.

American Grapes two Centuries Ago.

It appears that several of our native grapes were taken to England, about 1620, the date of the landing of the Pilgrims. In the year 1640, a Mr. Parkinson wrote a book on fruits, in which he described some of the grapes brought over from America. His account of one or two is so odd, we beg to cite it for the amusement of our readers. Will Dr. Grant, or Messrs. Bissell & Salter, recognize the descriptions as belonging to any of their new and costly varieties? Read:

"4th.—*Vitis Sylvestris Virginiana*. This one sort of vines, like all other wild sorts, runneth on the ground, and taketh hold of whatsoever it meeteth with, but the grapes are small and white, with little sappe or juyce in them, and the kernell twice as bigge as others. There is another sort that hath bigger blew grapes, and sourer in taste A third they call the Fox grape, and hath a regged bark, and very broad leafe, without any division almost, but dented, and the grape is white, but smelleth, and tasteth like unto a foxe!"

Parkinson speaks of another "which hath slender, reddish branches, with leaves of a dark, greene color, and somewhat thicke also; the fruite is like the other native sorts, having more skinne and kernell than substance or juyce."

The Grape Mania.

Heartily as we sympathize in the interest now felt, and increasing through the country in reference to the introduction of fine grapes, we yet think there is danger that the matter will be overdone. The grape is a delicious fruit, but by no means a fair substitute for the apple and pear. It does not furnish the variety of flavors, nor cover as wide a season in its periods of ripening. It can not be used for as many purposes, nor be kept as long in a fresh state. Fruit trees of all kinds, we know, are subject to manifold diseases, but somehow, a goodly number manage to live and bear abundantly. Let us not underrate the good old-fashioned things in our zeal for the new.

One result of the fever for new grapes, will be the palming off of many worthless varieties upon over-zealous purchasers. To avoid such imposition, the only way for the majority of people will be, to wait until some or all of our pomological societies have examined and pronounced on the merits of a variety. For, of course, every man who has a new seedling to sell, will try to persuade himself and others that his plant is the best grape in market, hardy, *perfectly* hardy, sweet as honey, without pulp, melting, never cloys, a most abundant bearer, etc., etc. Give a wide berth to these new, superlatively excellent seedlings of which nobody knows *save those who have a pecuniary interest in their dissemination.*

Another result will be the sending out of old grapes under new names. The Horticulturist for January mentions that a Kentucky grape, known for fourteen years as the "Bullitt grape," has lately been brought out with flying colors as a new seedling, under the name of the "Taylor grape." Let us be a little cautious. And if we must allow the mania to possess us a little, let us keep some sober friends by our side to guard us from too great indiscretions.

The Gooseberry.

In spite of the mildew which often attacks this fruit, it may yet be grown with success, if properly managed. The points demanding attention are simply these; a selection of the right sorts, proper soil and exposure, and proper pruning.

Such varieties as the Houghton Seedling, Downing's Seedling, and some foreign sorts are, to a good degree, free from blight. To a planter we would say: inquire of the nearest nurseryman and of your neighbors, what sorts succeed best in your locality, and select from them.

As to soil, it is a mistake to suppose that this fruit needs a very dry situation to prevent mildew. It is impatient of drouth, and must have a deep mellow soil where its roots can always find enough to drink. Therefore, let the soil be broken up to a good depth, if it is not naturally deep; and as the plant is a high liver, work in a lot of manure. Some persons plant their bushes under the drip of trees, for the benefit of their shade; but this is is a mistaken practice: it renders the fruit small and more liable to mold. Rather, set them in an open border, well prepared as above, and if the season proves very dry, spread under the bushes some old hay, tan-bark, coal-ashes or the like, for mulching. Every Spring, take off this mulch, spade in old manure, and return the mulch. Prune with a firm hand. This work should be performed in the Fall or early in the Spring, before the sap begins to flow. Let it be the pruner's aim to keep down all suckers, to thin out a large part of the old and crooked wood, and enough of the new to prevent the branches from becoming matted, and to let in plenty of light and air. No fruit-tree or bush requires so severe pruning as this. The berries, too, should be thinned out when a quarter grown.

The gooseberry requires a renewal of the plants about once in six or seven years. For this purpose, select, say in this month of March, the strongest and healthiest shoots of the preceding year's growth, prune out all the buds on the part of the cutting to go below ground in planting, (to prevent future suckers) and bury the cuttings in sand in the cellar, till the Spring fully opens. Then prepare a good soil, and set them in six inches deep, leaving four or five inches above ground. If they are laid a little sloping, it will be better. They will nearly all take root and in the following Spring may be transplanted.

Early Asparagus and Rhubarb easily Obtained.

The long cold Winter is over, and the sight of something fresh and green from the bosom of mother earth would be refreshing. The dish of Aspargus, by all who know the article, is highly appreciated. It is among the earliest luxuries that come to the table, and one of the most healthful. At a dollar a bunch, it tastes of the silver, and the citizen, unless he own a mine, must indulge sparingly. But the villager or farmer who owns a rod square of well stocked Asparagus has a mine out of which to dig luscious shoots early in Spring, without a taste of copper, even.

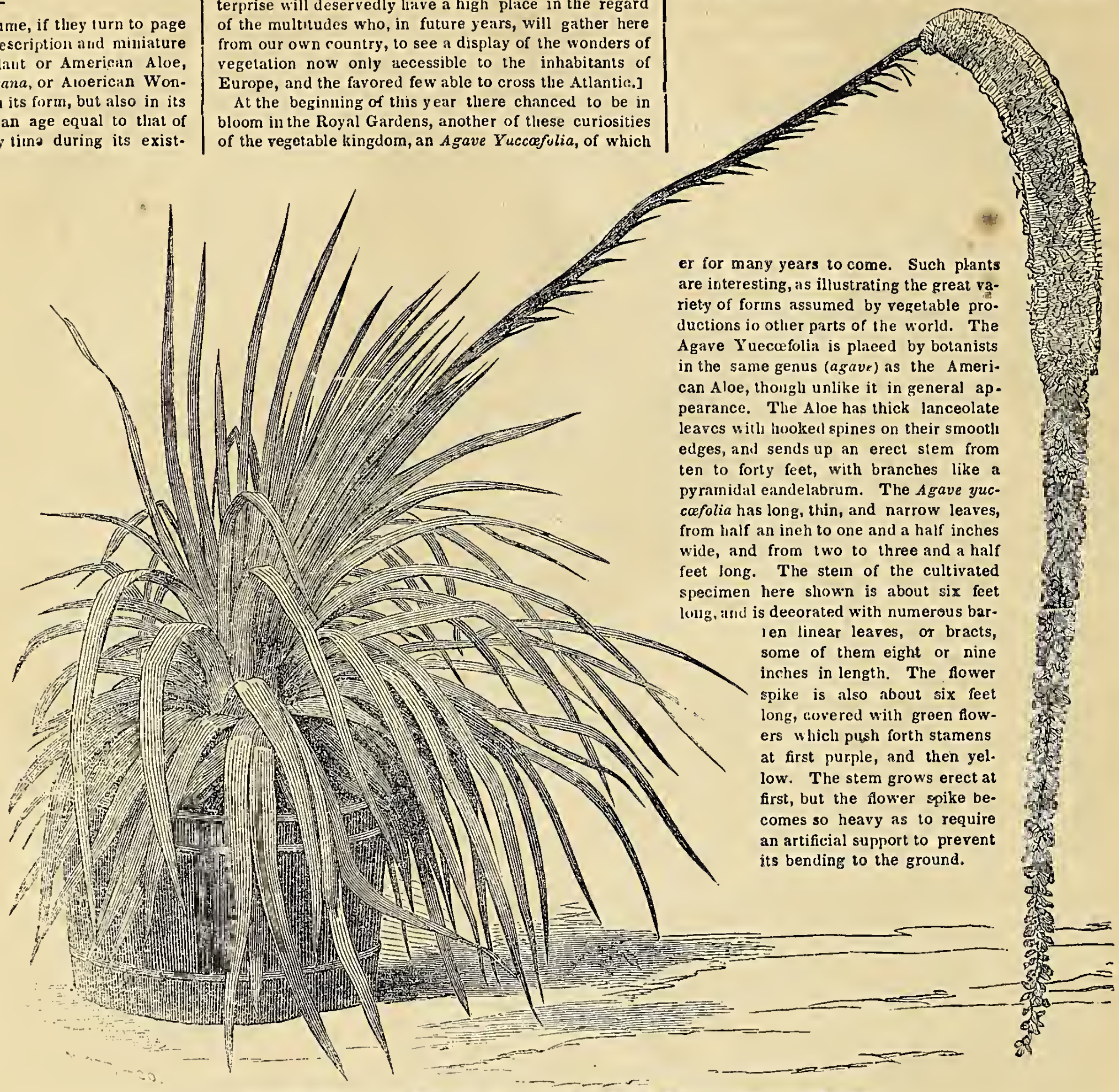
The professional gardener, of course, knows how to get them with his hot-bed and forcing manures. Take good strong roots, three years old, and put them upon a bed of fermenting manure, and there is no difficulty. But for several years past, we have found coaxing quite powerful enough to induce our favorite vegetable to anticipate the season three weeks. We put upon the bed a simple board frame, twelve feet by six, and cover it with sashes. The frame inclines to the sun, about one foot in the six. The outside of the frame is banked up with horse manure, or any coarse litter, to keep out the cold. Between the rows of Asparagus, which are about eighteen inches apart, we sow lettuce, radishes, peppergrass, or any thing else of a hardy nature that we wish to get early. The glass retains the heat of the sun by day, and keeps off the cold by night. The surface heat brings up the seeds in a few days, and a little later, the purple shoots of Asparagus make their appearance. They grow almost as rapidly as in June, and are quite as tender and good flavored.

We secure early Rhubarb by the same method, without disturbing the roots, and put in about a bushel of stable manure, or rich compost around each crown. The sashes are then put over, and no air is given until the crowns begin to make their appearance above ground. Indeed the leaves are not liable to burning, and the sashes require very little attention until the stalks are fit to cut. The Myatt's Linnæus is admirable for this kind of forcing, and, all things considered, is the best variety we have ever cultivated. The sashes may be put over Asparagus and Rhubarb now.

Wonderful Plants.

Those who have our last volume, if they turn to page 17, (Jan. No.) will there find a description and miniature representation of the Century Plant or American Aloe, rightly named the *Agave Americana*, or American Wonder. It is wonderful not only in its form, but also in its mode of growth, as it lives to an age equal to that of man, then for once, and the only time during its existence, it sends forth a crop of thousands of golden flowers, and dies. In its native Mexican or other Southern home, its age is usually from thirty to sixty years, but when transplanted to the greenhouse of the North and subjected to an artificial life, it requires 80 to 130 years to perfect its growth and prepare for its final display; so that those who plant it can hardly hope to ever see it in bloom. The plant described last year was supposed to be 120 years old, and was then just blooming in the Royal Botanical Gardens, at Regent's Park, near London, where are collected living specimens of all known plants from every part of the world. None but those who have visited these Gardens can have any conception of the pleasure to be derived from seeing gathered under a northern sky, the varied productions of the tropical climes. They are so provided with a warm, moist, congenial, artificial atmosphere, that they flourish with almost as much vigor as when growing in their native habitat. [We are glad also to note in this connection, that a movement is now on foot to establish similar gardens in the Central Park in this city. An enterprise of such importance can hardly fail to be carried into execution; and during the present generation we shall hope to see an establishment which shall rival in interest the much noted gardens of the old world. The men who contribute their time and money to this enterprise will deservedly have a high place in the regard of the multitudes who, in future years, will gather here from our own country, to see a display of the wonders of vegetation now only accessible to the inhabitants of Europe, and the favored few able to cross the Atlantic.]

At the beginning of this year there chanced to be in bloom in the Royal Gardens, another of these curiosities of the vegetable kingdom, an *Agave Yuccœfolia*, of which we here present a sketch, as being an object of interest, and perhaps the only one of the kind that will be in flower for many years to come. Such plants are interesting, as illustrating the great variety of forms assumed by vegetable productions in other parts of the world. The Agave Yuccœfolia is placed by botanists in the same genus (*agave*) as the American Aloe, though unlike it in general appearance. The Aloe has thick lanceolate leaves with hooked spines on their smooth edges, and sends up an erect stem from ten to forty feet, with branches like a pyramidal candelabrum. The *Agave yuccœfolia* has long, thin, and narrow leaves, from half an inch to one and a half inches wide, and from two to three and a half feet long. The stem of the cultivated specimen here shown is about six feet long, and is decorated with numerous barren linear leaves, or bracts, some of them eight or nine inches in length. The flower spike is also about six feet long, covered with green flowers which push forth stamens at first purple, and then yellow. The stem grows erect at first, but the flower spike becomes so heavy as to require an artificial support to prevent its bending to the ground.



Agave Yuccœfolia, In Bloom in January at the Royal Botanical Garden (England.)

Foxglove—(*Digitalis.*).

This plant, besides being highly ornamental, is possessed of active medicinal properties. A subscriber in Sibley Co., Minn., writes: "I would like to know if you can get any seed of a plant called Digitalis. In Germany where it is well known, it is called fingerhut; I do not know its English name. I am troubled with 'palpitation of the heart', and an excellent druggist tells me that the Digitalis would be a certain cure, if I could get it"....The seed of this plant, which is commonly called Foxglove, has been offered in our flower seed list for two years past (No. 42). and is briefly described on page 4 of this volume (Jan. No.). As to its medicinal properties, it is narcotic,* sedative, and diuretic but when administered in quantities sufficient to bring the system decidedly under its influence, is apt to produce a sense of tightness or weight, with dull pain in the head, vertigo, dimness or other disorder of the vision, and more or less confusion of thought. Given under the immediate directions of a competent physician, it is doubtless often beneficial for diseases of the heart and other organs; but as it is an active poison if taken in over doses, or imprudently, we can not advise its use except by the skillful physician.

Foxglove grows wild in many parts of Europe, producing its beautiful flowers in mid-summer. In this country it is cultivated as an ornamental garden plant, and by herb growers for the druggists. A large portion of that produced for the latter purpose is grown by the Shakers at Lebanon, N. Y. The leaves should be gathered the second year, immediately before or in the early period of flowering, selecting only the fresh, full grown. The carefully dried leaves should then be kept dry, in close bottles or canisters, and away from the light, otherwise they soon deteriorate. The dried leaves are kept by nearly all druggists, but unless preserved as above directed, they can not be relied upon after having been on hand a year or so. Our correspondent and others may save their own leaves, if done under the direction of a competent druggist, with his Dispensatory formulas before him as a guide; but considering the dangerous results that it might produce, we must again advise all to avoid its use except when ordered by a good physician.

* *Narcotics* are those substances which given in small doses as medicines, allay morbid susceptibility, relieve pain, and produce sleep; but which in over doses produce stupor, lethargy, convulsions, and death if pushed far.

Sedatives assuage pain by allaying irritability and irritation; they calm, or soothe.

Diuretics produce free discharge of urine

Flowers from the Prairies.

We have several communications from subscribers at the west similar to the following postscript to a business letter from A. G. Smith, Young America, Warren Co., Ill.: "....Here on the prairies are hundreds of flowers which under cultivation and eastern care and treatment would be acquisitions....If it suit your convenience, I will be happy to forward specimens in their season for your inspection and analysis; also such seeds as I may be able to secure of desirable varieties...." We shall be glad to receive such specimens and seeds, and as far as practicable will examine and experiment with them. Last year we tried over a hundred specimens of various kinds, but owing to several untoward circumstances, the experiments were not very satisfactory. The coming season we hope to give much more attention to this department. It will not be possible to attend to any small parcel consisting of only a seed or two, and not accompanied with full and definite descriptions. When any one sends plants or seeds, we hope they will send as many particulars as may be, including information whether the plant be annual, biennial, or perennial, the kind of soil and location most natural, apparent preference for light or shade, etc

Gardening in Old Times.

The writer's library has lately been enriched by an English book on gardening, written a century and a half ago by Charles Evelyn: a few extracts will amuse the readers of the *Agriculturist.*

"About the latter end of February, graff apples, pears, &c., in the clift, and so continue till the end of March, when the sap arises briskly: the new moon is the best time." [Some moon-guided cultivators have come down to our day.—Ed.]...."Gather herbs in the full of the moon, dry them in the shade, shewing them to the sun a little, only to keep them from being musty."...."Sow winter herbs in the new of the moon!"..."Gather olitory seeds, clipping the herbs with one handfull of the ground before full of the moon."...."In Spring, cover tender flowers and evergreens with mats or canvass, from the farewel frost and easterly winds."....."Sick trees, impaired by removing, and other accidents, are many times recovered by a milk diet, that is, diluting it with a portion of water discreetly administered; sometimes by letting the tree down into a pit of 4 or 5 feet in depth, covering the head and the rest of the tree. [Not very clear this.]

"Continue to cleanse all parts of your garden, and let not your hough be idle when the weeds begin to peep." [A most excellent rule.—Ed.]

"The Peony is a common flower, but yields the fairest and most double blossom of any, and is very becoming in your flower-pots or chimnies.

"The Sun-Flower grows very tall, and therefore is most fit for pots. [Some mistake here. Ed.]

"The Syringa Pipe-tree, or lilach, bears a blossom not much unlike the Persian Jessamine. It flowers in April and May, and yields plenty of suckers; but it is a nice plant, and requires the skill of a curious artist for its management.

"There is your rosemary gilded with yellow, and a sort of it variegated with white, very delightful to the eye, which are to be preserved under warm walls.

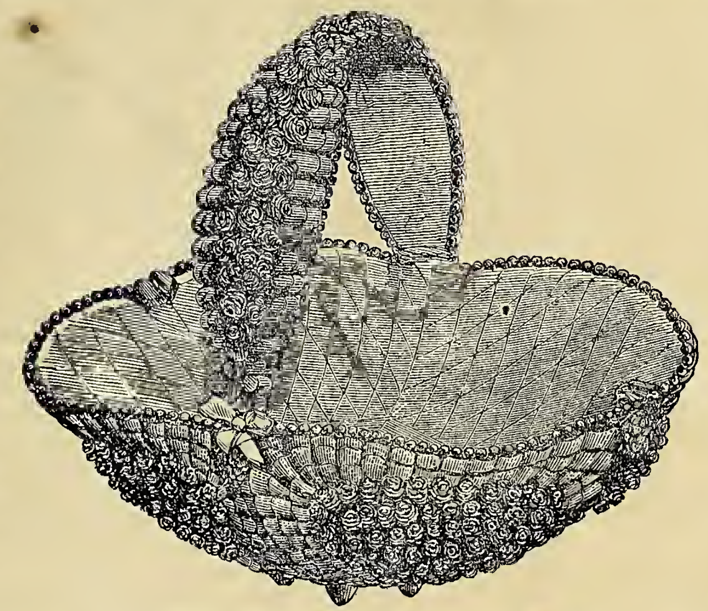
"Eugh (yew) trees being clipt and reduced to regular forms (the most beautiful whereof are the round and square pyramid,) make the most ornamental trees you can have in your garden."

Such was the horticultural literature in vogue no longer back than about the time this country was first settled. The moon was more consulted than the condition of the soil. In the writings of two thousand years ago which have come down to us, we find occasional scraps which indicate that similar directions were prevalent then.

But as wise as we think ourselves in comparison with our fathers, there is little doubt, that a hundred years hence, our mode of tillage, and our notions of the growth of plants, will be looked back upon as old fogyish in the extreme. Our implements may only be known as curiosities, stored in agricultural museums, and our books be quoted, as we have quoted from the above.

Spikenard Berries for Fruit.

V. Leonard writes to the *Agriculturist* from Bradford Co., Pa., that he experimented with berries of the Spikenard (Aralia Racemosa) and found them to make excellent pies. Others who have tasted them, he says, agree with him. The berries have a peculiar aromatic flavor, and no spice need be added. He also recommends the berries for making wine which is palatable and medicinal. Spikenard is a perennial herb easily grown, and if liked, will furnish fruit for cooking when most other fruits are out of season. Not having tried it, we can not speak further of its value.



Inexpensive Household Ornaments.—II.

EVERGREEN CONES FOR BASKETS, ETC.

Last month, reference was made to using natural objects for ornamenting rooms. There is hardly a limit to the selection which can be made, for almost everything in Nature is beautiful—tree, rock, flower, moss, bird, insect, and creeping thing, all possess some feature, which the hand of taste can use for its purpose. The *Agriculturist* is receiving specimens and descriptions of such ornamental designs, as will make this part of our in-door department an attractive one, and do much, we trust, to create and improve taste. This month we illustrate the method of using evergreen cones for making fancy articles, specimens of which were furnished by Miss Anna Pettinger, Kings Co., N. Y. Fig. 1 shows a card-basket, made chiefly from the scales of white pine seed-cones, and whole seed vessels of hemlock; cones of other evergreens can be used in the same manner, and any desired shape given to the work. The basket here illustrated, was made thus: Pieces of pasteboard were cut of the right shape to form the basket, when sowed together. A small wire, properly bent and sewed around the edge of each piece, holds it in shape. Then the more ornamental part of the work as wreaths, rosettes, etc., are made by sewing to the pasteboard small whole cones of hemlock, acorns in their cups, walnut shucks, etc., disposed to suit the taste of the maker. The interstices left, are filled with the scales of the pine cones; yellow pine are the neatest. These are sewed on, lapping one over the other, like shingles upon a roof, thus hiding the stitches. A very neat rosette is made by cutting off the bottom of a yellow pine cone. The seed vessels of the Tag Alder are pretty for trimming. The scales and other parts may be glued or cemented to the pasteboard, but they look neater when sewed. The separate parts when finished, are joined, and the inside of the basket lined with pink or other bright colored silk, quilted in. Open seams left where the edges of the pieces meet, may be covered by a beading of allspice berries strung on strong thread or fine wire. Similar trimming is sowed around the edges of the basket, and of the handle. Four large acorns inverted and glued to the bottom, form neat supports.....Fig. 2 represents a *picture frame,* made of the same materials, the pasteboard being fastened to the woodwork; or, the cones might be glued directly upon the wood. For such larger objects, larger cones are appropriate. Those of the white pine split lengthwise with a knife, and the flat side laid down give variety.

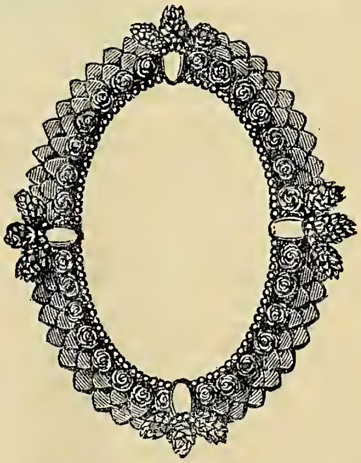


Fig. 2.

Varnishing.—When all is fastened, the work is covered with varnish, made of an ounce of gum shellac, dissolved in a pint of alcohol. Some give it two coats, adding a little vermilion to the varnish for the first coat, and a very little lampblack for the second, to darken the shade. A finishing coat of copal varnish gives additional luster.

For the American Agriculturist.

Music in the Family.

Music is healthful. There is no better cure for *bad humors,* and no medicine more pleasant to take. I can not join those who lament that the piano is heard where once the monotone of the spinning-weel, and the click of the shuttle, were the only instrumental performances. It is a matter of rejoicing rather, that muscles of iron and fingers of steel, driven by the tireless elements, now perform the laborious work of cloth manufacture, and give leisure to cultivate refined tastes in the household. Music is to the ear and to the intellect, what strawberries, peaches, and other luscious fruits, are to the taste. Who regrets that the forests have been cleared, the walls and fences built, the grain crops made sufficiently easy of cultivation, to allow the addition of the fruit yard and garden for the enjoyment of the cultivator? One of the greatest attractions for old and young when visiting our cities, is the music that may be heard here. Why should the farmer's household not be as cheerful, as full of pleasure, as that of the merchant or the professional man? I know of nothing more genial and heart-warming than to hear the whole family joining in a hymn or song. They will love each other and their home better for it. Songs learned in childhood, are like birds nestling in the bosom; their notes will be heard and loved in after years. The hymn sung by a mother to her little boy may in other days be a voice that will recall him from ruin. The philosopher was not far from right who said "let me write the songs of a nation and I care not who makes their laws," for the words of song *melt* their way into the heart. No one can doubt that at least one President of the United States owed much of the enthusiastic support given him to the spirited songs everywhere sung during the canvass. We can yet almost hear the "Tippecanoe and Tyler too," as it used to swell from the thousands assembled at mass-meetings. As a source of innocent and refining enjoyment, a means of right moral training, and a gentle but powerful *home magnetism*, parents should encourage the practice of music at the fireside. The piano may be too costly, but the accordeon, the flute, or the violin, are within reach of all; and even better than any or all of these, is that wonderful instrument, the human organ, fashioned by the Master, adapted to and intended for the richest melody, which may be tuned in childhood, and taught to fill the house with praise and with delight. VOCALIST.

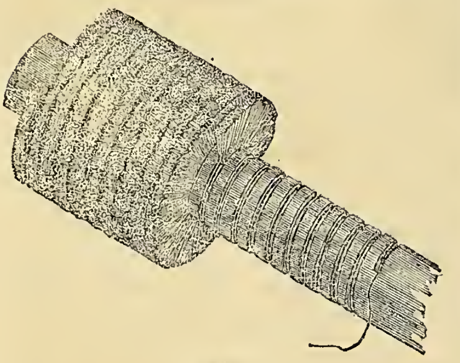


Fig. 1.

New Mode of Making Brushes.

The common method of making most kinds of brushes has been to draw the bristles into gimlet holes, in little tufts. Mr. Shaler has recently invented a plan of making them in the manner illustrated in fig. 1. A spiral groove is cut upon a round piece of wood; the bristles are then laid on, and with a continuous wire are bent into the groove and held firmly there. The advantages claimed for this method are, that the bristles are more uniformly spread over the surface; that a considerable saving is made in the labor of manufacturing; and that a round brush presents a bristle surface on all sides, and will wear longer than one having only a single flat surface. We are not certain that this mode will take precedence over the old one for common clothes-brushes, though the manufacturers claim that they can and do furnish a better round brush at the price of the flat; but for cylindrical brushes, required in machinery, in carpet-sweepers, etc., it appears to be a valuable improvement.

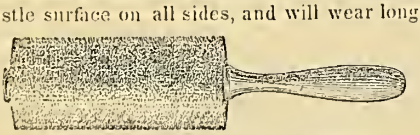


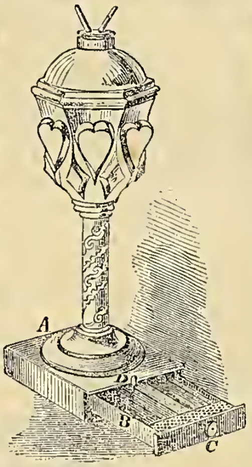
Fig 2—A COMMON CLOTHES-BRUSH.

Escaping from a House on Fire.

The Western Female Seminary, at Oxford, Ohio, was entirely consumed on the night of Jan. 13th. The fire caught under the roof, and made such headway before being discovered, that only a part of the furniture and clothing in the upper rooms could be saved. Our special object in alluding to this matter, is to speak of the self possession of one of the young ladies, which doubtless saved her life. The example of the benefit of self-possession and not allowing fear to run away with the judgment, and also the means of escape adopted, will, we hope, not be forgotten by those who may chance to be placed in similar circumstances. The lady, whose room was in the fifth story, had returned to it to secure some articles still remaining. While in the room, the flames and smoke burst into the hall and cut off her retreat. She immediately closed the door tightly, and then tore up the bedding and made a rope of it. Shoving the bedstead against the window, she tied one end of the rope fast to the rail, and the other end around her body, and let herself down. But the rope proved too short, as it reached only down to the second story and left her suspended in the air twenty feet from the ground. Holding firmly on with one hand, with the other she unwound the portion around her body, and this let her down so far that she dropped to the ground without injury. Springing up as if nothing had happened, she ran to her Preceptress and asked what further she could do to help others. This is one of the most striking instances of cool, intrepid courage we have heard of. How much better than to have run to the window and called for help which probably could not have been afforded, or, in despair, to have flung herself to the ground to meet almost certain death.

Combined Lamp and Match Box.

Annexed we present an illustration of an arrangement invented by Thomas Shanks, of Maryland, which is designed especially as a convenience for those who have occasion to light a lamp during the night. The base of the lamp *A*, is made hollow to admit the drawer *B*, in which, matches or tapers, or both, may be kept so as to be always at hand. The drawer is pulled in and held there by a concealed spring. The knob *C* is on the end of a rod which is connected with the catch *D*, so that on pulling out the drawer and turning the knob part way round, the catch is turned up and holds the drawer out until the knob is turned back. In front of the box is a piece of sand paper for rubbing the matches upon. The two compartments in the drawer are designed, one for matches, and the other for burnt sticks.

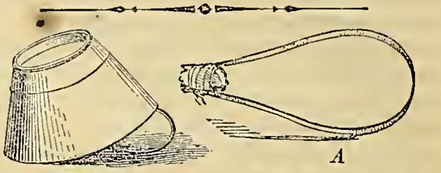


Freezing out Cockroaches.

To the Editor of the American Agriculturist

I went with my family into the country, to spend a portion of the holidays, leaving my city house closed during what Merriam would call a "cold term." Upon reopening it again, the first discovery made, was the large number of apparently dead cockroaches, which traps, powders, and poisons, had failed to exterminate. Looking into the cracks and crannies which they had formerly infested, scarcely a roach was found, they having stiffened and fallen upon the floors and shelves I found, however, on warming the house, that a few of them began to show signs of life, so I immediately brushed them into the dust-pan and made a burnt, or *peace* offering of them. I now have scarcely a live roach left, where before were hundreds, and I throw out the hint to your city readers, some of whom I have reason to know would take a trip to the country, even in the dead of winter, if by so doing they could rid their premises of these pests of the

Brooklyn, Feb. 5. HOUSEKEEPER.

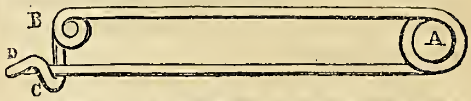


An Effective Mouse and Rat Trap, which Costs Nothing.

One of the simplest, and most effective traps we have ever seen, has just been presented to us by an office associate. Others may have seen it before; we have not. It consists of a piece of basket or chair bottom splint, bent into hoop form, as shown at *A* in the engraving. Where the two ends are brought together, a piece of cheese is tied in for bait. The hoop is then placed under the edge of a bowl or other vessel, inverted upon a piece of board, as seen in the sketch. A slight nibbling at the bait lets the bowl down, and catches the intruder, who may then be drowned by dipping the bowl into water, or sliding him into it. The apparatus is so simple as not to be feared by mice, or the notoriously shy rats. For the latter animals, a heavy tin pail, or milk pan, or large earthen dish may be used. A weight may be put on, if necessary. For mice a common bowl is large enough. Half a dozen bowls may be rigged out and set in a very few minutes.

A Home-made Shawl Pin.

A correspondent sends to the *Agriculturist* a description of a shawl pin, which is so easily and cheaply made, that we publish it for the benefit of those needing such an article, and who can not readily purchase one of more finished manufacture. Take a piece of bright brass, steel, or iron wire, about eight inches long; sharpen one end with a file or on a grindstone, smoothing it on a whetstone. Three inches from the sharp end, wind it twice or three times about a round stick, making a coil as shown at *A*. At about three inches from *A*, make a single coil *B*; give the remaining end a turn down, then up, to make the hook *C*. Then twist it out towards *D*, so as to form a guard over the sharp point, cut it off the right length, and the pin is completed in less time than we have taken to describe it.



Hints on Cooking, etc.

[The following nine good recipes are taken by permission from a *copy-righted* pamphlet issued by Mr. Crozer, of Mercer Co., N. J., who was formerly largely engaged in the baking business, preparing cooking extracts, etc. We doubt not our readers will find them valuable.—ED.]

ALMOND CAKE.—Mix together until very light, 1 lb. of sugar, and ¾ lb. of butter; then add gradually 1 pint of white of eggs, well beaten up; mix until light, and flavor with extract of Bitter Almond; then add 1¼ lbs. of flour; mix it in carefully until smooth. Put in a greased and papered pan; bake in a moderately hot oven. If baked in smaller cakes they need a hotter oven.

GINGER CAKE.—*Of the very best kind.*—Gradually mix 1 quart of the best molasses into 6 ounces of butter; flavor with extract of Ginger; add a scant ½ pint of water or milk in which is dissolved 1 ounce of saleratus, then add enough flour to enable it to be rolled out. Cut in cakes, and bake in a hot oven. Too much flour will spoil it. By using only a little more than half the flour, an excellent soft ginger cake can be made.

Ginger Nuts.—To ¾ of a pound of butter mix 1 quart best molasses; add 2 eggs; flavor with extract of Ginger, and add 1½ ounces of saleratus dissolved in ½ pint of water or milk; then add about 3½ pounds of flour. After mixing, make them up into small balls; put on greased pans; flat them slightly, and bake in a moderate heat.

Spice Nuts.—Mix together 1 quart of the best molasses and ½ a pound of butter or lard; flavor with extract of Clove—extract of Ginger will improve it; then add ½ a pint of water in which is dissolved 1½ ounces of saleratus; then add about 3½ pounds of flour. Make the dough up in small round balls; put on pans, flat them slightly, and bake them in a moderate heat.

Delicate Cake.—Mix 1½ pounds of fine white sugar, and 1 pound of good solid butter, until light, then beat up to a stiff froth 1 pint of white of eggs, and add few at a time, and mix carefully; flavor with extract of Vanilla, and add 1¼ pounds of sifted flour, and mix it through very carefully. If made in small cakes, bake in a hot oven, or stove. If made in one cake, a cooler oven is required.

Jackson Snaps.—Mix together ½ a pound of butter or lard, and ½ pound of brown sugar; then add gradually 1 pint best molasses; flavor with extract of Pimento; a little extract of Clove or Ginger will improve it; add ¾ of a pint of water or milk, and enough flour to make it middling stiff. Make the dough up in small lumps, put them on greased pans, and press them very flat, and bake in a moderately hot oven or stove.

Domestic Cake.—Mix together 8 ounces of sugar and 6 ounces of butter; add 2 eggs; mix, and flavor with extract of Cinnamon; add ¾ of a gill of water, in which is dissolved ½ a teaspoonful of saleratus, then sufficient flour to have it rolled out and cut in cakes. Pan close, and bake in a hot oven or stove. Too much flour will spoil either of these recipes.

Tea Cake.—Mix together 1 pound of sugar and ½ a pound of butter; add 2 eggs; mix, and flavor with extract of Celery, or other articles to suit the taste, add ½ a pint of milk in which is dissolved a teaspoonful of saleratus; then add flour until stiff enough to roll out. Cut in small cakes; put on greased pans, a little distance apart, and bake in a very hot oven or stove. Be careful not to get too much flour.

Spanish Biscuit.—Mix ½ a pound of sugar and 6 ounces of butter together, add 3 eggs, and when well beaten add ¼ of a pint of milk or water in which is dissolved ¼ of an ounce of saleratus; work this well in, and flavor with extract of Lemon, then add 14 ounces of flour; work it in well, then drop the dough on greased pans, in small lumps, a little distance apart, flat them slightly, and bake in an oven hot enough for bread.

Lemon Pie.—The best we have tasted, made by Mrs. H. M. B., Kings Co., N. Y., after the following recipe, and contributed by her to the *Agriculturist*. Take two lemons, four eggs, two spoonfuls melted butter, eight spoonfuls white sugar. Squeeze the juice of all the lemons, and grate the rind of one. Stir together the yolks, sugar, butter, juice and rind. Cover a plate with pastry, pour the mixture in, and bake till the pastry is done. Then beat the whites of the eggs to a stiff froth, stir into it four spoonfuls of sugar, put it on the pie, and bake a delicate brown. This quantity makes two common sized pies.

Delicious Corn Bread.—By the same. Boil a tea-cup of rice. While scalding hot mix it with a little less than a quart of corn meal, four eggs well beaten, a tablespoonful of lard, a teaspoonful of soda, a little salt, and enough sour milk to make a thin batter. Bake quick.

Label the Poisons.—If arsenic, strychnine, or other poisons are kept in the house, let the word Poison, be distinctly printed upon the vial (paper packages are not safe receptacles for such articles). Keep them locked up, and the key in your own pocket, and burn all that you have no use for. These precautions might have saved thousands of lives.

Familiar Talks by the Doctor......III.

Mr. Editor:—As the Spring approaches, and there is more and more to be done by the farmer in his duty of obtaining from mother earth that food on which we all depend, it is not inappropriate to say what more I have to add concerning *overwork*. Last month it was its effects upon the man himself of which I wrote, now it is of its effects on the wife and children. It is with no disrespect to any one that I have before compared the farmer's treatment of himself, or perhaps I might even say his neglect of himself, with the tender care which he takes of his favorite horse. With as little disrespect, I ask, would you think of requiring a four year old colt to do as much as a horse of eight years? If he is ever so free a worker, would you *allow* it? Is it not often wise to let the colt grow older before he is permitted to do any work at all, breaking being the utmost discipline and labor to which he is subjected? Why should you treat your boys and girls with less care than you do your colts?

The fact is, the human animal is longer in maturing than other animals, and we get tired of waiting for it to arrive at adult years—the boys and girls themselves get tired of waiting, and, in this country especially, are anxious to become men and women before they have attained the necessary age—they strive to undertake the full work of men and women, and are allowed to do so; fortunate if they do not suffer for it. I have only to shut my eyes and I can see whole troops of them that I have known. I seem now to see Flora Quick, with whose appearance I was so much struck when I first met her. Slender and graceful as a young willow, her large blue eyes sparkling with life and animation, her flaxen curls falling on her shoulders, her lips bright with the red blood that rushed through her veins and peeped through the delicate skin of her cheeks—ah! she was beautiful. Was it strange I watched her as she moved about, now looking after the churning, now seeing that the dinner was cooking properly, now spreading the table, now running into the cool cellar for something that was needed, lifting the kettles round as if it was child's play, never sitting, never stopping? She was an only daughter, the pride of her father and mother, the idol of her brothers, the promised wife of as fine a young man as I ever saw. Once when I saw her thus at work, I said to her: Flora, are you always as busy as this? "Oh," she answered, "I do not call this being very busy. You ought to see us in haying time."

I suppose you get very tired by night?

"Yes, I am always glad to go to bed"—(she was a girl of too much good sense and real refinement to pucker up her mouth and call going to bed, *retiring*, as I have known some people do.)

At what time do you go to bed usually.

"About ten o'clock or soon after."

How early do you get up?

"At this time of year (it was May) at half past four." (Hum, thinks I to myself, six and a half hours sleep, too little by at least an hour and a half.)

Do you feel entirely rested in the morning?

"No, never, unless it is Monday mornings, but then after I get up, and get to work I am as lively as ever. But, Doctor, seems to me you are growing wonderfully inquisitive. You do not think you can get me to take your pills, do you?"

Oh no, but I had some curiosity to know how much you could do.

"Do!" said her mother who was standing near, "she is the smartest girl of the whole neighborhood. I have hard work to beat her, and yet to look at her you would not think it. I do not wonder John came here for a wife."

Thinks I to myself, neither do I, as I saw the beautiful blush that came to her face at her mother's last remark.

When I had a fitting opportunity, the daughter not being present, I turned to Mrs. Quick, who was in the room and said, I used to think you loved Flora, but find I was mistaken.

"'Love her'! 'mistaken'! what do you mean Doctor."

I am sorry, I say, that you do not love your daughter.

"Doctor, I *do* love her; I often fear too well."

Oh no you don't, Mrs. Q, for if you did, you never would allow her to overwork herself as she does, and it is my duty to tell you plainly that if you do not put a stop to it, she will soon be my patient, and soon ———

"Why Doctor you are mistaken. She only does what she chooses without any urging, she likes to do it and she is perfectly well."

The decision rests with you, and I hope I am mistaken, but am sure I am not.

My warning was unheeded. In the Fall of that year I had a lovely patient in that house. In the Spring there was a funeral there, but no daughter afterwards. And all this of overwork. She was *ambitious*; she did more than her strength was equal to, she died.

So it is with the boys, though I do not think they are so apt to be overworked as the girls. They get more recreation as in fishing, and hunting, and nutting, and skating, while the girls are pretty constantly at home, sometimes, but too rarely going a berrying. Too seldom are they allowed for a day to stroll in the fresh air, or to lay aside any of their round of duties. Let them have their recreations, their amusements, their resting periods, and especially so, if it is necessary, as I admit it may sometimes be, to overwork them for a few days. Be more careful of them than of your horses, and be sure they will repay you abundantly in your old age.

The same thing holds true with regard to the wives. I need not recapitulate what I have said, and only add that they should be especially guarded against too much labor previous to the birth of each child. But I can not say the tenth part of what might be said on *this* subject, if more room could properly be devoted to it in the *Agriculturist*. I therefore only add that I beg your readers to use the same good sense in the physical education of their children that they do in the care of their working cattle. It will save much suffering from ill health on their part, and on the part of their parents, and add greatly to the amount of happiness.

P. H. E.

THE LUCKY BRANCH.—FROM A PAINTING BY P. LEVIN.
(Engraved for the American Agriculturist.)

The Editor with his Young Readers.

[A private word with you, young friends, about your parents. They may not think it proper for us to be whispering to you about them, but if they don't read this page, why they will know nothing about our chat. Not long ago we heard a little boy complaining, that his father did not love children. He said, "he did not believe his father ever was a boy, for he never seemed to take any pleasure in boys' amusements." We have heard similar expressions from others, whose parents were compelled to work so hard that they were generally too weary, when not occupied, to enter freely into the feelings, sports, and amusements of their children. Perhaps you, without knowing it, have sometimes felt, as the boy referred to expressed himself. But this is a mistake. However your parents may *appear* to you now, it will be years, before you can fully know and appreciate how much they truly love you, and how much pleasure they really take in seeing you happy. Some people never express half of what they feel, and others express, on the wrong side, a great deal more than they feel. If you happen to hear your wearied, care-worn father or mother say that they don't want to hear your noise, or listen to your talk, you must not conclude that they have no real interest in the things which you enjoy. We do not believe there are any parents, and but *very* few other grown up people, in the world, who are not really pleased when they see children happy—no matter how morose or unfeeling they may *appear* to be. Let us give you

A TELLING ILLUSTRATION.

Not long since we chanced to know that an old subscriber complained of the engravings, and especially of the Boys' and Girls' department, in the *Agriculturist.* If you had seen that man's expression of countenance, as he spoke—his stiff, up-and-down demeanor, and his dignified bearing on all occasions, you would have thought him one who would be glad if no more children were ever born. We determined to test his heart, and so taking time when a little at leisure, we handed him a copy of the paper which he had not yet seen. He sat down with it, and we appeared to be attending to something else, but kept an eye on him. The first thing he did was, to look all through the paper, and carefully examine and even study the pictures. Then, before looking over a single other article, he turned to the boys' and girls' columns, and *read them all through*—stories, puzzles, and all. Then he read the headings to the other articles, and finally settled down upon those topics which he at first led us to believe he would have the whole paper filled up with. Once before, we tried a similar experiment upon another complainer, and with precisely the same result. Now we are sure that these men, in their hearts, really love children, and take pleasure in the things that please them. And so it is with all other grown up folks. They love to unbend, though their notions of dignity may keep them from appearing to do so. Some of the most dignified and learned of our subscribers, clergymen, professors in colleges, and legislators, have actually expressed to us their pleasure at the introduction of these boys' and girls' columns. Just watch *your* parents, and see if they do not read your special department. You will then cast away that feeling you may have harbored, that grown up persons have no interest in the things that please you. We know they have, they all have, and that you have more sympathy and love for you, than you have yet dreamed of. But, *One Hint Here.*

Our young friends must not by any means think that these columns of the paper are the only ones for them to read. They should read the whole of it; read about the trees, and plants, and flowers, and about the cattle, and the modes of culture too. Don't fail to read and study the articles about insects, commenced in this number—they will open a new field of instruction and delight

"THE LUCKY BRANCH."

The picture above, would be pretty, simply as a group of innocent, happy children. It was painted, however, in illustration of a custom prevalent in the hop-growing towns of England. As the English people are great beer-drinkers, hops are in demand, and large gardens or fields are devoted to their culture. The hop-gardens of the counties of Kent, Sussex, and Herefordshire, are the most extensive. In Kent County alone, about thirty thousand acres are devoted to this single crop! and as many more in the other two counties named. And many of these hop-gardens are almost as beautiful as the vineyards of Southern and Middle Europe. The hop-picking season is especially one of activity as well as mirth. At this time, it is customary for the pickers to select the best branch of hops each one can find, and whoever finds the largest and most beautiful one, carries it as a present to the proprietor. This is called the "Lucky Branch," and the finder expects and usually receives some nice present in return. Our picture represents a group of children going with their prize. The little fellow bears aloft the lucky branch, seated astride his brother's neck, with his arm around the sister's head. The satisfaction and the hope expressed in the countenances of this group, are happily brought out by the artist. It is a fine sketch for copying by those who are practicing with the pencil or brush.

WHAT DO YOU THINK OF YOURSELF?

Our first reading book, in school, was the *old* Webster's spelling-book—not "Webster's Elementary," but one a couple of generations older, for Cobh's spelling book came between the two. Almost the first line of reading we spelled out in that book was: "T-h e w-i-c-k-e-d f-l-e-e w-h e-n n-o m-a-n p-u-r-s-u-e-t-h." That was a pretty hard lesson for a little boy to read, and a still harder one to know the meaning of; but in those days, teachers and others had not learned, as now, that it is better for scholars to have lessons that they can understand. We well remember how puzzled we were to make out why a flea should be wicked, when no man pursued it. Yet after all, that hard sentence may have done us more good than an easier one, for it made us think a good deal, and thinking, you know, makes the mind grow strong, just as working makes the body strong. Well, we of course found out, afterwards, what our lesson meant, and how many times since have we seen proofs of the truth that the wicked flee, run away, are scared, when there is no real danger—their consciences, their own hearts, tell them that they have done wrong, and the feeling that they at least deserve to have somebody after them, makes them afraid; while the righteous are as bold as a lion—they feel that they have done nothing wrong, and have no cause to be otherwise than bold, manly, fearless, like the lion Young friends, when you act so that you are not afraid of yourselves, you will have far less fear of others. When alone and tempted to do wrong, because you think no one will see you, stop and say, "I shall see myself, and I will not degrade myself in my own eyes." Yes, have as much respect for yourself, for your own opinion, as you have for that of others; do nothing which will lower you in your own estimation, and then you can walk forth confidently, and not shamefacedly, in the presence of others. Now promise not to forget the subject of this lesson, not forget to stand well in your own regard, and we will tell you a story illustrating how a man's fears of Satan, or his feeling that the old fellow ought to pay him a visit, made him act, or

HOW A MAN GOT SCARED.

Formerly, when wood, instead of coal, was burned in our large cities, the narrow chimneys rapidly filled up with soot, and it was necessary to have them cleaned out oftener than now. There were a good many persons, called "chimney sweeps," who made it their constant business to clean out chimneys, and as the sweeper was often obliged to go down into small flues, little boys were engaged for this purpose. In a block of buildings, where the houses were all alike, one of the occupants engaged a man with his boy to clean out his chimneys. The boy was let down from the top by a rope, but as it chanced, he went into the wrong chimney, and unexpectedly to himself and the occupant, he landed, all blackened and begrimed with soot, in the office of a man who was just planning out a wrong business transaction. The man started up in amazement, and verily believed a little *imp* had arrived. The boy was equally frightened, and cried out, "My father's coming in a minute." The man thought that if the "old fellow" himself was coming, it was time to make tracks, and he rushed from the room in terrible fright, while the boy scrambled up the chimney again. One bad business scheme was stopped, and we hope, no others were ever afterwards undertaken by this man.

A BOY SEEING A STRANGE SIGHT.

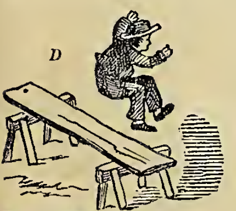
A pretty good story is told of a boy who chanced to be born in a backwoods cabin, (he was none the worse for *that*,) where a looking-glass had not yet been added to the furniture, and none of the younger inmates had been favored with a daguerreotype sight of their own "looks." The boy referred to, like many other boys, was very careless in his dress, and no advice of his mother, or shaming of his father was successful in keeping him in respectable trim. His face was seldom washed, and his hair never combed; and as to his hands, you could never tell the natural color, because you could never see down to the skin. ....It happened that this boy was sent on an errand to a neighboring farmer, who had recently got a new mirror. While there, he chanced to get square before the glass, and turning round, he obtained the first full view of himself he had ever had. What he thought of his personal appearance, you can imagine from the result. Without stopping to take a second look, he bolted through the door, ran home in breathless haste, rushed to his father, and exclaimed, that at the house where he had been 'they kept a little devil—he had seen him in a cage in the wall."......When your hair is uncombed, your hands and face unwashed, or you are otherwise slovenly just remember that *cage in the wall*!

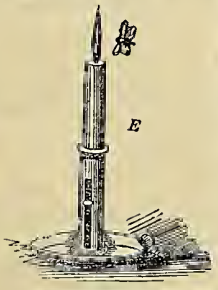
ABOUT SOME COMMON ERRORS IN SPEAKING.

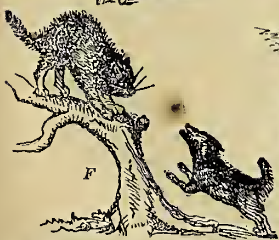
Some older people may find it useful to look over the following from our contributor ANNA HOPE :

" What a fuss some *people* make when they are sick," a child exclaimed to me, and immediately added, " why don't you say *persons?* you always do." She remembered that she had been told that *people* means a nation, and should not be used, as it so often is, where *persons* only are referred to.....*Illy* is frequently used instead of *ill.* There is no such word as *illy.* Persons may be *ill* prepared for any occasion, but they never can be *illy* prepared for anything.....*Tasty* is a vulgarism. *Tasteful* is the proper word.....We often hear certain kinds of food spoken of as *healthy* or *unhealthy* for us. Vegetables may be healthy or unhealthy in themselves, just as we may be ill or well, but for us they are *healthful* or *unhealthful*.... *Sunthin* is sometimes used for *something*.....It is not uncommon to hear *his'n*, *her'n*, *our'n*, *your'n*, *their'n*, instead of *his*, *hers*, *ours*, *yours*, *theirs*. These words are evidently contractions of *his own*, *her own*, *our own*, etc., but they are never proper....." I must go up stairs and be *a* getting ready for meeting." Omit the *a* and " be getting ready." " I must be *a* doing something," is a kindred wrong expression....." Just as *live* as not," should be " just as *lief* as not."..... Say, " So far as I know," and not " Fur's I know."....." I should *like* to do it," not " I should *love* to do it." We *love* that which has life. We may *love* a cow, but we must *like* beef. We can not *love* apples and pears, puddings and meats, but we may *like* them. We must not *git* them for our friends although it may be very kind to *get* them.....Do not talk about reading the adver-*tise*-ments in a newspaper—place the accent on *ver*, and say ad-*ver*-tisements.....Tell not your friends that your Charley is a mis-*chiev*-ous boy, but if you wish to mention the fact, you can say that he is *mis*-chiev-ous. If he should try to run away, make no attempt to *ketch* him. Simply endeavor to *catch* him. Neither should you tell him inter*est*ing stories ; those that are *in*teresting will please him quite as well. If he tells you he would *drather* go to see his aunt, you can tell him you would *rather* he should stay at home. If he is dissatisfied and cries, do not say to him " What *maksh* you cry ?" Indeed, never change the sound of *s* into *sh* before the letter *y*, as is so frequently done. " He is a *nish* young man." " *Ash* you please." " We *passh* your house," etc.... ." You may have the two *first*, or the two *last*," is often heard, yet there can be but one first and one last. It should be the *first two* and the *last two*.....Do not say " have you *lit* the lamp ?" but, " have you *lighted* the lamp ?".....*Elder* and *eldest* are applied to persons, *older* and *oldest* to things.....*Less* refers to quantity—*few* to numbers. " No *less* than a hundred persons were at the party," should be " No *fewer* than," etc......Remember that you are *taught* by others, and *learn* yourself. You may *teach* a child his lessons, but you can not *learn* them to him. He *learns* by his own efforts.

ANSWERS TO PROBLEMS.—Our young friends, and some of the old ones too, have had considerable fun over the " Puzzling Pictures " of last month (No. 4,) judging from the number of answers sent, and the odd remarks made.







D, represents a boy in danger of drowning because he has jumped *over-board.* James S. M. Bradley wrote that the boy "is in a *spring*" which was an ingenious answer and perhaps as good as the one given by the maker of the puzzle. Wm. P. Wilson and H. A. Cone, think he is sinking, which certainly puts him in greater danger.

E reminds us of a man just getting from his horse, because he is *going to a-light.* You see the insect in the picture is doing the same thing.

In *F* we see the cat's up, very plainly, and *catsup* is generally liked as a table sauce. Andrew Hageman wrote " the cat's-up, looking rather *saucy* too," which we think a *spicy* suggestion.

Correct answers to the above were received from S. Groosh, M. Bigger, Jefferson Brown, Thomas Montford, S. A. Camp, Andrew Hageman, R. Riley. H. A. Cone, (thank you for sending the labyrinth. We have, however, enough of that kind of puzzles on hand), Victoria B. Rogers, Otis Wood, Emory Mills (we'll think about the music), George F. Sly, Franklin Adams, J. S. Coles, Geo. L. Emery, Henry W. Kempton, Nathan H. Darby, Aunt Sue (sends her love to Willie B., and all the other *B's.*), W. H. B., Frederic Anderson, Thos. H. Phelps, W. J. Lane, E. R. Font, W. Virscher.

No. 5. A man contracted to purchase the apples from a tree, agreeing to give $10 for them if there were 10 bushels, and $18 if there were 20 bushels. 18 bushels were gathered. How much ought he in justice to pay ?

The difficulty here is, to decide whether a reduction should be made in the price of each bushel of the whole eighteen, or only in the eight additional bushels. A number have answered he should pay $10 for the first 10 bushels, and 90c. per bushel for the remainder, or $17 20 for the whole." We think not. The purchaser values the apples according to the supply. If he has 20 bushels instead of 10, the increased quantity reduces the value of the whole. 10 bushels were worth $10, or $1 per bushel, but 20 bushels would be worth only 90 cents per bushel : Now 10 bushels added, reduce the price 10 cents per bushel, or each bushel added reduces the price 1 cent per bushel. Then 8 bushels added, reduce the price of the whole 8 cents per bushel, and 18 bushels at 92 cents (the reduced price) amount to $16.56. This answer was obtained by Thos. Montford, S. A. Camp, George F. Sly, Geo. L. Emery, J. S. Coles, E. R. Font, W. Virscher.

No. 6. *Rebus.* $\frac{\text{——}}{2}$: 'L B B B B L E D H I S $\frac{\text{C C C C}}{\text{D D D D}}$ an D 3 X D $\frac{\text{————}}{\text{throw}}$ 60 minutes T T T T.

Interpretation.—Colonel Forbes led his forces over the fords, and threatened to overthrow our forts. Read aright by Mrs. J. Shallcross, Otis Wood, Fred. Andrews.

Additional answers to Problems in Jan. To No. 1.—Arthur Cunningham, Jacob Montgomery, Geo. Elcock, Willard Follett, J. S. Coles, Subscriber at Quakertown, A. H., Otis Wood (we find your mistake to be giving 50 lbs. to B.; that was A's portion. Our figures were right).

NEW PROBLEMS.

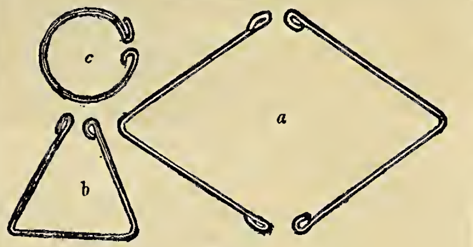


Fig. 1.

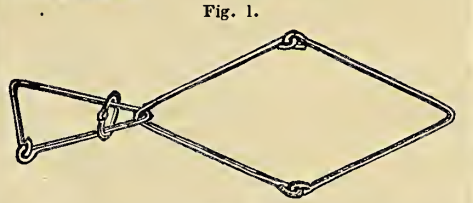


Fig. 2.

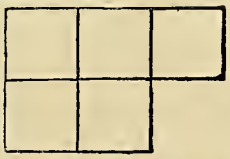
No. 7. Wire puzzle. Some ingenious person in this city has lately invented a wire puzzle which we like so well, we have engraved it, and give a description of it, so that the *Agriculturist* boys can make one for themselves.

Bend two pieces of wire, each say four inches long, to the form shown at *a*, Fig. 1., the looped ends being spread an inch and a half apart. The piece *b*, has sides an inch long, and the circular piece *c*, is three fourths of an inch in diameter. Loops or hooks are made on the ends, to join the pieces as shown in Fig. 2. The loops in *a*, Fig. 1, should be large enough to make a loose joint or hinge when they are united, so that the two parts may be doubled together easily. Join the loops to complete the ring, and also those of piece *b*, slip the ring over the end of *b* ; then pass one piece of *a* through the corner of *b*, below the ring to bring them in the position shown in Fig. 2 ; unite the loops to make the large jointed piece, and the puzzle is completed.

Now try to remove the ring without unjointing any piece, and without springing the looped ends of the large piece together. It can be taken off and put on easily, *when you know how.*

We shall not call for answers to this puzzle. Make it and keep it for your own amusement and that of your friends.

No. 8. ECONOMICAL FENCING.



Mr. Jacob W. Moore, furnishes the following, which may be new to some. A farmer has five square fields fenced as shown in the Fig. He wishes to remove three fences and leave three fields all completely fenced. Which ones shall he remove?

No. 9. What four United States coins amount to 51 cents.

ERRORS OF THE TYPES.—Amusing sentences sometimes occur through the omission or misplacing of a letter. One of the best and most truthful we have seen, was the omission of an *x* in the last word of an advertisement of a quack medicine, which made it read thus : " To be efficacious it must be applied *internally* and *eternally*."

Everybody likes polite children. Worthy persons will pay attention to such, speak well of their good manners, and entertain a high opinion of their parents. Children, make note of this. Yes, and it would be as well if not a few parents would take a note of it likewise.

Premiums Still Open.

[The premiums below are offered for subscribers to Volume XIX, whenever received. Those having partial lists made up can complete them, and new lists can still be formed.]

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.* Every article is the best of its kind, and will be selected with especial care by the Publisher.

REMARKS.—1. *The premiums below, except No. IV, are all for* NEW SUBSCRIBERS ONLY, *as we can only afford to pay premiums for once on the same subscriber. But* ☞ *in making up any premium lists, two renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞ *Names need not all be at the same Post Office.*

2. Of course but one premium can be paid on the same name. The canvasser will choose his own premium. Any one striking for a higher premium, and failing to get names enough, can still fall back upon a lower one.

3. Every person collecting names for premiums can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers ; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, " For premiums," and with the name of the sender.

4. Any premium will be paid as soon as the list for it is completed, if we have the duplicate lists to refer to at once. (To avoid confusion, we omit the numbers of premiums previously offered, but now withdrawn.)

Premium III.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies (that is one extra copy), for the coming year.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8¼ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles. (Expense after leaving the city to be paid by recipient.)

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines,** new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two years' use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia*, now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Publisher's price, $45.

Premium XIII.—To every person sending 260 *new* subscribers at $1 each, or 330 at the lowest club price (80 cts. each), we will present one of *Allen's Mowing Machines*, with sundry improvements now being added. This is one of the best we have seen in operation. Price $115. Other kinds of Machines of the same price, will be substituted, when specially desired, if satisfactory arrangements can be made with the manufacturers.

Premium XIV.—To every person sending 65 *new* subscribers, at 80 cents each, we will present one of the best *Eagle Plows* (2-horse). Price $11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 *new* subscribers at 80 cents each, we will present the best *Subsoil Plow* (two-horse), price $8 ; *or* one of the best *Horse-Hoes*, price $8 ; *or* one of the best *Straw and Hay Cutters*, price $8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 *new* subscribers, at 80 cents each, we will present one of the best *Steel-tooth Cultivators.* Price $7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best *Hand Corn Shellers.* Price $6 50.

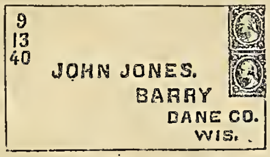
Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3,) or a *Double mold-board (ridging) Plow.* Price $3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, the publisher will pay premiums in books as follows: Every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from A. O. Moore's Catalogue, (which is advertised on page 316 October Agriculturist) to the amount of 10 cents for every subscriber, sent in at 80 cents each. Persons making up a club for any of the premiums, and getting some names over the required amount, will be entitled to books for the surplus names. Thus, a person getting 55 subscribers can take for 45 names premium VII. or XVII, and also $1 worth of books for the extra 10 names; and so in other cases.

Seeds for Free Distribution in 1860.

Every subscriber to the present volume is invited to select four or five parcels of seed from the list below. The seeds can be called for at the office, or sent by express when, for large clubs, or they will be put up and forwarded by mail if post paid letter envelopes are provided

E. If to go by *mail*, the applicant will (of course) furnish *prepaid* envelopes, of ordinary size, which should be prepared as in the engraving here given—that is: Put the figures corresponding to the Catalogue plainly on the upper left hand of the envelope, and put all the postage stamps upon the right side of the envelope—one above the other, when two or more are needed, as shown in this pattern. This will prevent the seeds being crushed in the stamping process, in the Post-Office. One ordinary envelope will generally hold the amount of seed-packages carried by two or three stamps. ☞ *The amount of stamps can be calculated from the Catalogue. Single 1-cent stamps on letters are of no value, unless there be even threes of them, as letter postage is rated by the half ounce.*



N. B. For the Pacific coast, 10-cent stamps must be used where 3 cent stamps are named in the list. Letters to Canada need not necessarily be prepaid there. (If to be prepaid send coins, and not Canada Stamps, as these are not received at our P. O.)

LIST OF SEEDS.

[For Descriptive Notes upon these Seeds see pages 3 and 4 of January number.]

Field Seeds.

2—Improved King Philip Corn—Single, double, or triple packages, as may be desired, requiring one, two, or three 3-cent stamps.
3—Stowell's Sweet Corn—Same packages as No. 2.
94—Crystal Flint or Hominy Corn—Same as No. 2.
6—Ashcroft's Swedish Turnip—Half of 3-cent stamp.
7—River's Swedish Stubble Turnip— do. do.
70—Waite's London purple-top Swede Turnip—do.
98—Long Red Mangold Wurtzel—One 3-cent stamp.
101—Improved Long Orange Carrot—½ of a 3-cent stamp.

Vegetable or Garden Seeds.

8—Daniel O'Rourke Pea—Packages same as No. 2.
9—Champion of England Pea—One 3-cent stamp.
99—Prince Albert Pea— do. do.
57—Eugenie Pea— do. do.
58—Napoleon Pea— do. do.
12—Green Kohl Rabi—One-third of a 3-cent stamp.
13—Enfield Market Cabbage— do. do.
15—Mammoth Cabbage Lettuce— do. do.
100—Early Purple Cape Broccoli—do. do.
21—Winter Cherry— do. do.
95—Hubbard Squash— do. do.
108—Mammoth Pumpkin— do. do.
109—Mammoth Red Tomato— do. do.
12—Imported Brussels Sprouts— do. do.
16—Musk Melon— do. do.
17—Water Melon— do. do.
703—Sage— do. do.
104—Thyme— do. do.
105—Chili Red Pepper— do. do.
106—Sweet Marjoram— do. do.
17—Red Strap-Leaf Turnip—One-half of a 3-cent stamp.
74—Solid White Celery— do. do.
75—Green Curled Endive— do. do.
55—White Globe Onion— do do.
71—Long White French Turnip—One 3-cent stamp.
107—Giant Asparagus— do. do.

Flower, Fruit, and Ornamental Seeds.

89—Cotton Plant (2 kinds)—One 3-cent stamp.
90—Norway Spruce Seed—One-half of a 3-cent stamp.
91—Arbor Vitæ Seed— do. do.
111—Castor Oil Bean— do. do.
110—New-Rochelle Blackberry—½ of a 3cent-stamp.

On an average about five of the following 40 varieties will go under a 3-cent stamp

23—Mignonette.
25—Mixed Nasturtiums.
27—Extra Cockscomb.
29—Double Balsams, mix'd.
30—Tassel Flower.
31—Chinese Pink.
32—Portulacas, mixed.
33—Cypress Vine.
34—China Asters, mixed.
35—German Asters, mixed.
38—Sweet William.
40—Escholtzia Californica.
42—Foxglove.
47—Morning Glory, mixed.
49—Candytuft.
50—Schizanthus.
51—Phlox Drummondii.
78—Ageratum Mexicanum.
80—Yellow Hawkweed.
83—Snap Dragon.
84—African Marigold.
85—Gaillardia, mixed.
86—Euphorbia, mixed.
87—Coreopsis.
113—Double Sun Flower.
114—Mixed Petunia.
115—Mix. Dbl. Hollyhocks
116—Mourning Bride.
117—Mix. Dbl. Wallflower.
118—Bee Larkspur.
119—M'd Chrysanthemums
121—Trumpet Creeper.
122—M'd Canterbury Bells
123—Gilia nivalis.
124—Whitlavia.
126—Centranthus.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Saturday Evening, Feb. 18, 1860.

The market for most kinds of Breadstuffs has been unsettled during the past month. The receipts of Flour have been less extensive than those reported in our previous *Review*. At one time, holders manifested much firmness,—encouraged by the prevalence of a fair home demand, and a moderate export inquiry. Within a week or ten days, this firmness has disappeared, and has been followed by an eagerness to sell, which has depressed prices, especially of low and medium brands, which are most abundant and in least request. During the past few days the demand for such brands has been limited, and prices of such have favored buyers. The better grades have been more sought after, and have been quoted firm....Wheat has been less active. Prices, recently, have been declining Desirable lots are not being freely offered, as holders are anticipating an improvement in the market for such. The demand has been mainly from millers and shippers... Corn has arrived in heavier quantities, and having been only moderately sought after, it has materially decreased in value. The bulk of the receipts are from the South. The market has been almost bare of Mixed Western for some time past....Rye has been in limited request, at reduced rates....More activity has been discernible in Barley, which closes firmly. Included in the sales, have been several lots taken for Philadelphia and Baltimore....Oats have attracted more attention, and though prices declined early in the month, they now tend upward....Cotton has been less sought after, yet prices close higher....Hay has been more freely offered and has fallen off in price....Hemp and Hops have been in slack demand, and Hops are cheaper....Seeds have been in request, at buoyant prices ....Rice has been actively inquired for, and has advanced ....Provisions have been briskly dealt in. Hog products close higher....A fair business has been reported in Tobacco, which is steady....Wool has been very quiet, and prices have favored purchasers....The transactions in most other kinds of Produce have been restricted.

CURRENT WHOLESALE PRICES.

	Jan. 19.	Feb. 18.
FLOUR—Superf to Extra State	$5 20 @ 5 45	$5 00 @ 5 35
Common Western	5 20 @ 5 30	5 00 @ 5 10
Extra Western	5 35 @ 7 50	5 30 @ 7 25
Fancy to Extra Genesee	5 50 @ 7 25	5 45 @ 7 25
Super. to Extra Southern	5 60 @ 7 25	5 40 @ 7 25
RYE FLOUR—Fine and Super.	3 60 @ 4 40	3 60 @ 4 40
CORN MEAL	3 85 @ 4 25	3 40 @ 4 15
WHEAT—Canada White	1 37½ @ 1 45	1 30 @ 1 45
Western White	1 37½ @ 1 50	1 30 @ 1 50
Southern White	1 40 @ 1 55	1 45 @ 1 55
All kinds of Red	1 19 @ 1 35	1 18 @ 1 30
CORN—Yellow	82½ @ 85	78 @ 79
White	82 @ 85	78 @ 79
Mixed	83 @ 84	78 @
OATS—Western	45 @ 46	44 @ 45
State	45½ @ 46½	45 @ 46
Southern	40 @ 43	38 @ 41
RYE	88 @ 91	86 @ 87
BARLEY	75 @ 88	69 @ 86
White Beans	1 00 @ 1 20	1 00 @ 1 15
HAY, in bales, per 100 lbs.	1 12 @ 1 25	93¾ @ 1 12½
COTTON—Middlings, per lb	11 @ 11⅜	11¼ @ 11⅝
RICE, per 100 lbs	3 50 @ 4 25	3 75 @ 4 50
HOPS, crop of 1859 per lb	12 @ 18	9 @ 18
PORK—Old Mess. per bbl	16 12 @ 16 25	17 50 @
Prime. old, per bbl	@ 11 50	12 37 @ 12 50
BEEF—Repacked Mess	9 00 @ 9 62½	9 00 @ 10 00
Country mess	5 00 @ 5 25	5 25 @ 5 50
HOGS, Dressed corn, per lb	6¾ @ 7⅛	8 @ 8¼
Lard, in bbls. per lb	10¼ @ 10⅝	11 @ 11⅜
BUTTER—Western, per lb	12 @ 17	11 @ 15
State, per lb	15 @ 23	14 @ 22
CHEESE, per lb	9 @ 11½	9½ @ 11½
EGGS—Fresh, per dozen	21 @ 24	18 @ 19
POULTRY—Fowls, per lb	8 @ 12	10 @ 12
Geese, per lb	8 @ 10	8 @ 10
Ducks, per lb	11 @ 13	15 @ 17
Turkeys, per lb	10 @ 13	11 @ 14
Venison, carcass, per lb	8 @ 11	5 @ 7
FEATHERS, Live Geese per lb.	43 @ 52	42 @ 48
SEED—Clover, per lb	8 @ 8¾	8 @ 8¾
Timothy, per bushel	2 12½ @ 2 75	2 50 @ 3 25
SUGAR, Brown, per lb	6½ @ 8¾	6½ @ 8¾
MOLASSES, New-Orleans, pr gl	51 @	44 @ 48
COFFEE, Rio, per lb	10¾ @ 12½	11¼ @ 12¾
TOBACCO—Kentucky, &c. pr lb	4 @ 12½	4 @ 12½
Seed Leaf, per lb	6 @ 25	6 @ 25
WOOL—Domestic fleece, per lb.	33 @ 62½	38 @ 60
Domestic, pulled, per lb	30 @ 52	28 @ 50
HEMP—Undr'd Amer'n pr ton.	120 @ 150	120 @ 150
Dressed American, per ton	160 @ 200	160 @ 200
TALLOW, per lb.	10½ @ 10¾	10¼ @ 10½
OIL CAKE, per ton	27 00 @ 35 00	32 50 @ 36 00
APPLES—Dried, Per lb	6 @ 8	6 @ 7¼
Dried Peaches—pr lb. South'n	10 @ 17	10 @ 15
POTATOES—Mercers, p. bbl	1 75 @ 2 13	1 87 @ 2 12
Peach Blows, per bbl	1 25 @ 1 62	1 50 @ 1 75
Cabbages, per 100	3 00 @ 5 00	3 00 @ 5 00
Onions, Red, per bbl	1 62 @ 1 75	1 75 @
White and Yellow, per bush	1 75 @ 1 87	2 00 @ 2 50
Squashes, Marrow, p. bbl	1 75 @ 2 00	3 00 @ 3 25
Turnips, Rutabaga, per bbl	1 13 @ 1 25	1 12 @ 1 25
APPLES, Winter, per bbl	2 25 @ 3 50	2 75 @ 3 75
Cranberries, per bbl	12 00 @ 14 00	9 00 @ 13 00

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 bus. ds. *this* mon.	82,468	24,752	308,487	7,046	61,157	72,370
25 bus. days *last* mon.	126,630	74,900	179,550	3,900	23,875	141,600

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
26 business days *this* mon.	241,468	139,000	371,000	45,600	205,600
25 business days *last* mon.	261,750	192,800	435,500	24,100	45,000

Breadstuffs exported from N. Y., from Jan. 1 to Feb. 15.

	1859.	1860.
Wheat Flour, bbls.	53,876	73,841
Rye Flour, bbls	1,486	245
Corn Meal, bbls	13,477	10,732
Wheat, bush	16,749	97,612
Corn, bush	12,973	62,591

The following is a statement of the exports of the principal kinds of Breadstuffs from the Atlantic ports of the United States since Sept. 1, 1859:

To Great Britain and Ireland.

From	To Date.	Flour, bbls.	Wheat, bu.	Corn, bu.
New-York	Feb. 8, 1860	186,943	434,316	13,798
New-Orleans	Feb. 1, 1860	8	——	——
Philadelphia	Feb. 2, 1860	7,572	75,777	4,250
Baltimore	Feq. 1, 1860	——	——	——
Boston	Feb. 1, 1860	733	——	——
Other Ports	Jan. 27, 1860	15	——	——
Total from Sept. 1, 1859		195,271	510,093	18,048
To about same period, 1858		85,731	412,425	319,852
To about same period, 1857		590,749	3,269,837	921,953
To about same period, 1856		619,172	6,605,795	2,705,415

To the Continent.

From	To Date.	Flour, bbls.	Wheat, bu.	Corn, bu.
New-York	Jan. 31, 1860	26,028	——	——
Other Ports	Latest dates.	3,119	——	——

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been moderately supplied during the past month—only 14,558, or an average of 3,639 per week. Feb. 15, prices ranged: Premium beeves, 11c.@12c.; first quality or prime, 10c.@10½c.; medium, 9c.@9½c.; ordinary and poor, 7c.@8c. Average sales, 8¾c.@9c., being an advance of more than 1c. ℔ lb. during the month. The supply was rather short at the last general market, prices advancing ½c.@¾c.

VEAL CALVES—Receipts for four weeks past, 1,688—all of which have been sold at nearly uniform rates, viz.: 7c. @7½c. ℔ lb., live weight, for the fattest; 5½c.@6½c. for fair to good calves; and $2@$3 for "bobs"—those a week old, more or less.

SHEEP AND LAMBS.—These are now in short supply; and are worth 5½c.@6c ℔ lb., live weight, for fair to good sheep, and 6½c.@7½c. for very fat premium mutton. Receipts of live sheep for the last four weeks, 29,680, with large quantities of dressed mutton.

HOGS.—Receipts have been light, amounting to but 11,035 for the four weeks just ended, or an average of 2,759 per week, which is 10,596 less than weekly average for the five weeks preceding. Corn-fed hogs are now worth 6¼c. @6¾c. ℔ lb., live weight: and still-fed, 6c.@6½c.

The Weather for the month ending Feb. 17th, has been quite variable, with several snow storms, and some pretty cold days, the mercury touching zero in exposed localities. Very little rain has fallen during the month, and in the vicinity of this City there have been but few days of passable sleighing. OUR DAILY NOTES, condensed, read thus: *January* 19, 20, 21, clear and mild weather, which continued with almost a Summer atmosphere until the 25th—26, cloudy, with a fall of 1½ inches snow at night—27, clear and mild—28, cloudy—29, 30, 31, clear, warm, until the afternoon of 31st, when the weather suddenly changed to cold, with a fall of 3 inches snow at night—*February* 1, cloudy A. M., clear and very cold P. M.—2, coldest morning of the season, mercury at 0-3, still cold, (2°) but moderated during the day, light fall of snow at night—4, cloudy A. M., clear P. M., passable sleighing—5, cloudy—6, fog and rain—7, clear and warm—8, cloudy—9, clear and fine—10, clear, cool, with very high wind, doing much damage to buildings and shipping—11, cloudy, light snow at night—12, 13, 14, clear, moderate—15, cloudy A. M., raging snow storm P. M. and at night—16, cloudy—17, clear and cool.

A Long Milker.—J. Clapham, D. C., writes that he has a cow about nineteen years old that has given milk enough for a small family, without having a calf for six years and eight months. She gives at the present time from four to six quarts per day.

Business Notices.

☞ *Sixty Cents a Line of Space.*

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* * *

Brower's Leather Preservative.—The proprietor of this compound has submitted to us a full explanation of the composition, and mode of making, which being done, we are free to speak of it. It contains nothing injurious to leather, and judging both from its composition, and after a few months' trial of it, we can commend it as a good article for the bottoms and sides of boots and shoes. We do not approve of applying any waterproof material to the upper part of either boots or shoes, except when they are to be constantly in water. This portion should be left as open as possible, for the escape of perspiration which, if retained, keeps the feet cold, and rots the leather.

Bogus Land Advertisements—Fertilizers.—W. F. B., Franklin Co., Mass. We know little of the lands you inquire about. There are doubtless some chance plots which might be selected by a competent judge on the ground, but the good qualities of a majority of the magnificent farming lands advertised there, and at other points at the East, are *on paper*. Its all nonsense to talk of large tracts of good land near New-York, Philadelphia, etc., as having remained overlooked to this day. The fertilizer you inquire about we have not seen. There are few artificial compounds in market worth the buying, or even the freight and cartage.

Flower Garden Books.—Mrs. S. S. Luce, Trempeleau Co., Wis. Probably "Breck's Flower Garden," which sells by the publishers at $1, is as good a work as you can find at moderate cost. We obtain and forward post-paid all such works, when desired, upon receipt of retail price. McMahon's work on Gardening (costing $2 at retail or by mail) is very complete and practical for all varieties of gardening, and is most desirable—though for flowers alone, especially for descriptions, Breck's is preferable.

Delaware Grape—Correction.—M. D. Conyngham, of Lancaster Co., Pa., writes to correct an error in his communication on page 19, (Jan. No.) He has ascertained that the vine owned by Mr. Steele in Chester Co., Pa., was not planted there by Mr. Prevost, but was obtained by Mr. Steele from Mr. Prevost, who resided in Frenchtown, N. J., as stated by Mr. Ott.

Plans of Barns.—D. D. Davisson, Wood Co., Va. Plans and full descriptions of improved barns were given in the *Agriculturist*, for 1858. Vol. XVII, Sept. and Nov. Nos. Others will be given hereafter.

The average **circulation** of the *Agriculturist* for six months past has been somewhat over **Fifty Thousand Copies** per month. This is believed to be a larger circulation than that of any other Agricultural or Horticultural Journal in the world. Very large accessions of new subscribers are daily received.

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Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

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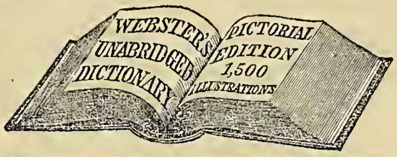

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C. M. SAXTON, BARKER & CO.,
Agricultural Booksellers and Publishers of the Horticulturist,
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SCHOOL TEACHERS WANTED.—The subscriber wishes to engage the services of a few School Teachers to act as traveling Agents in introducing his publications. For particulars apply immediately to
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PROFITABLE Employment may be had by addressing (post paid) R. SEARS 181 William-st, N, Y

Buckeye Premium Mower,

WITH FOLDING BAR.

AWARDED FIRST PREMIUM GRAND GOLD MEDAL BY U. S. AGRICULTURAL SOCIETY, AT THE GREAT SYRACUSE FIELD TRIAL.

The attention of Farmeys is invited to the "Buckeye" for 1860, which will combine all those features which have given it its present reputation, that of

THE BEST MOWING MACHINE IN THE WORLD,

in addition to several important improvements added the present season. The farmer intending to purchase a Mower will find it to his advantage to examine the Buckeye. The demand having considerably exceeded the supply for the past too seasons, farmers will avoid disappointment by sending their orders early in the season. Circulars forwarded on application, by mail or otherwise.
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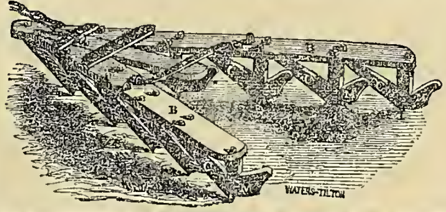

The best pulverizer of the ground yet invented. For a circular with description, and the testimony of practical farmers, who have used them, address at No. 45 Fulton-st.,
TREDWELL & PELL, owners of the Patent for New-York City and vicinity, New-Jersey, Pennsylvania and other States.

RUSSIA OR BASS MATS, SELECTED expressly for budding and tying, GUNNY BAGS, TWINES, HAY ROPES &c., suitable for Nursery purposes, for sale in lots to suit by
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I HAVE FOR SALE a few thorough-bred North Devon and Ayrshire Bulls and Heifers, that are desirable. ALFRED M. TREDWELL, 45 Fulton-st., N.Y. City.

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NEW-ROCHELLE BLACKBERRY WINE for Sale—in packages of 5 Gallons or upward, at $2.00 per Gall.—In boxes of 1 dozen quarts, at $7.00 per Dozen—by
DREW & FRENCH,
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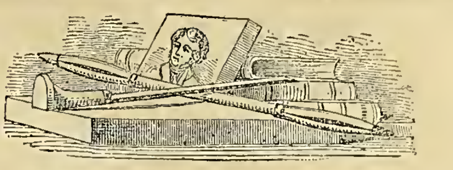

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All who may desire to have designing or engraving done, will find it to their advantage to call on the subscriber, who is prepared to furnish on the most reasonable terms, and in the best style of the art, PORTRAITS, views of BUILDINGS, PLANS, &c., of Agricultural Implements, Horticultural and Scientific subjects of every description.
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Architects,

OFFICES, BIBLE HOUSE, ASTOR-PLACE, NEW-YORK.

SUCCESS OF THE NEW AMERICAN STYLE for Cottages and Villas—being adopted by all gentlemen who have seen our examples—we call upon all about building this Spring, to examine our designs. For terms for making out plans, &c., enclose stamp and send for a circular containing an example.

WILLCOX & GIBBS [illegible]

$30

SEWING MACHINE

Simple, Noiseless, and Warranted to fill all the requirements of a

Perfect Family Machine.

Manufactured and Sold, Wholesale and Retail, by
JAMES WILLCOX,
No. 508 BROADWAY, opposite St. Nicholas Hotel,
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1860.

NEW CARPETS FOR SPRING TRADE.

The Subscriber is prepared to exhibit, at his New and Spacious Stores, 273 CANAL, through to 31 HOWARD STREET, a fine assortment of CARPETS in New Patterns, viz.:

MEDALLION CARPETS IN RICH DESIGNS.

Velvet Carpets	$1 25 to 1 60
Tapestry Brussels Carpets	92½ to 1 00
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Super Ingrain Carpets	62½ to 75
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OIL CLOTHS in superior quality, Druggets, Rugs, Mats, Mattings, Stair rods, &c., &c. All goods sold in Retail Department for Cash.
GEO. E. L. HYATT,
273 Canal and 31 Howard,
Between Broadway and Elm Streets, N. Y.

ALSO—Sole Agent for selling AUBURN POWER LOOM and Auburn Prison made 3 PLY INGRAIN and VENETIAN CARPETS.

Carpets for Churches and Lodges made to order.

SOMETHING NEW.

Shaler's Patent Cylindrical Brushes of all the various kinds which we claim are cheaper and more durable than the old style. Also the celebrated

SHALER CARPET SWEEPER

which is superior to all others, warranted to give satisfaction.
SHALER CARPET SWEEPER CO., Exclusive Manufacturers, 278 Pearl-st., N. Y.

Virginia Farm for Sale!

The subscriber wishes to sell one of his farms, situated (near Potomac River) in King George County, Va., containing 676 acres of land, a large portion of it very fine bottom—all of which grows corn, wheat, and tobacco, and grass, well. It is well supplied with timber and wood, and good water, in every field. The dwelling house is not in good order, but the out-houses, such as barn, corn cribs, &c., are all new. Persons living on the Potomac have their choice of markets at low freights—good mills are very near the farm, the society is among the best in Virginia. The price of this estate is $12,000, on easy terms.
Address GEORGE E. GRYMES,
Hempstead Post Office,
January 30th, 1860. King George Co., Va.

GREAT ATTRACTION! MICHIGAN LANDS!

Any actual landless settlers can get a donation of forty acres of valuable States land in Michigan. He can also purchase any quantity of good State-land at the price of $1 25 per acre, with the term of ten years for payment. Further information will be furnished by addressing R. DIEPENBECK,
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$1,600 WILL BUY A SMALL FARM of 27½ acres, with new house and barn—stocked with fruit trees. Location one mile south of the city of Schenectady. Title good. For particulars address to
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WANTED.—Experienced Book Agents are wanted in each County in the United States and Canada, to introduce *The New Illustrated Encyclopedia of all Nations*, one thousand engravings, many of them colored maps, charts, &c. For an appointment and for further information, apply immediately to HENRY BILL, Norwich, Conn.

FOR THE DEAF! FOR THE DEAF! ARTIFICIAL EARS. Can be concealed from view. Address HASLAM BROS., 429 Broadway, New-York, and a descriptive Circular will be send to any address.

TO PLANTERS.

PARSONS & Co.

AT

FLUSHING, L. I., N. Y.

In inviting attention to their stock, which is this season very large and of fine quality and vigorous growth, would remind planters that the soil and climate of Long Island are noted for producing thrifty, *well-ripened* wood: it is thus, that with the proper cultivation our trees have attained their reputation for hardiness and for uniformly succeeding when they receive the care to which all plants are entitled.

A member of our firm is now sending out from the nurseries of Europe the choice varieties of late introduction, and it continues to be our constant aim to present to admirers of fine fruit and beautiful vegetation, a selection worthy of careful examination.

Among the large variety we cultivate, we have only space to mention of

FRUIT TREES AND PLANTS

APPLE, fine trees, 3 to 5 years old.

PEAR, dwarf, in bearing state, and in large quantity.

PEAR, standard.

CHERRY, dwarf and standard.

PLUM, APRICOT, and NECTARINE.

PEACH, 1 and 2 years.

All the above can be furnished of suitable size and form for training on walls and for pot culture.

CURRANT, Versailles, Cherry, and other sorts.

MULBERRY, FIG, WALNUT and FILBERT.

GOOSEBERRY, American and English sorts.

BLACKBERRY, New Rochelle by the 1000.

GRAPE VINES of all the foreign sorts, strong and well grown in large pots, including the fine new kinds.

Our NATIVE GRAPES, embracing Concord, Delaware, Diana, Logan, &c., &c., are of very *thrifty* growth, and priced at moderate rates.

RASPBERRY, STRAWBERRY, RHUBARB, &c., &c.

Prices of Fruit Trees, Plants and Vines by the hundred and thousand at proportionately reduced rates.

TO OUR

EVERGREENS

we invite special attention. Among them are

NORWAY SPRUCE from 1 to 10 feet, and at low rates by the quantity,

ARBOR VITÆ, American, of many sizes for hedges.

" " Siberian, both small and large, and of very handsome form.

PINES, including Excelsa, Cembra, and others.

JUNIPERS, Irish, Heath-leaved, and others by the thousand.

RHODODENDRON, both seedling and worked.

YEW, Podocarpus, &c., &c.

All these, and many others, we offer at low rates at wholesale. Our list of

Deciduous Trees and Shrubs

embraces all that are cultivated for ornament, and of all the different sizes, whether for

THE GARDEN, THE LAWN, OR THE AVENUE.

THE EXOTIC DEPARTMENT

contained in nine houses, is now especially rich in Orchids and other choice Stove Plants, as well as in the large variety of Green-house Plants.

Purchasers will find our Plants well grown, and priced at low rates.

ROSES—We cultivate in great variety, and from our mode of propagation, they are sure to thrive.

For particular lists, with prices, of the different classes of plants, we refer to Catalogues No. 1 and No. 2, which can be obtained by mail, or from J. B. Parsons, No. 3 Nassau-street, New-York.

We ask the attention of

THE TRADE

to our collection of *new* and *rare* plants of various sizes, and suited both to nursery planting and immediate sale.

We can furnish a very large quantity of small plants at lower rates, than they can be imported for. Our collectors are keeping us supplied with seeds from different quarters of the world.

We will forward the Trade List upon application.

Orders will be filled with promptness and care, and packed for distant transportation. Goods delivered free of freight-charge upon Fulton-market wharf, New-York

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FRUIT AND ORNAMENTAL TREES.

For Spring of 1860.

ELLWANGER & BARRY solicit the attention of Planters, Nurserymen, Dealers, and others, to their large and fine stock of FRUIT AND ORNAMENTAL TREES, SHRUBS, and PLANTS, which they offer at wholesale and retail. All who intend to purchase trees this Spring, in large or small quantities will do well to consult the Catalogues named below. Our new Descriptive Fruit Catalogue is now ready for distribution. In general terms, the stock may be enumerated in part as follows, viz.:

STANDARD FRUIT TREES FOR ORCHARDS,

embracing all the most esteemed and valuable sorts for different parts of the country.

DWARF TREES FOR GARDENS—All the best varieties adapted to garden culture in this form

GRAPES—Hardy varieties, including

Delaware,
Diana,
Concord,
Hartford Prolific,
Rebecca,
Clara,
Emily,
Raabe,
Brinckle. &c.

GRAPES, FOREIGN, for vineries, including the Muscat Hamburgh, Stockwood Golden Hamburgh, Lady Downs, Buckland's Sweetwater, &c.

STRAWBERRIES—All the American and Foreign varieties of proved excellence in this country.

BLACKBERRIES—Dorchester and New-Rochelle or Lawton: of the latter a great stock of strong plants.

GOOSEBERRIES—The best English sorts, and a great stock of the American Seedling that bears wonderful crops and is exempt from mildew.

CURRANTS—White Grape, (the largest and best white Currant,) Victoria, Red Dutch, Black Naples, &c.

ENGLISH FILBERTS and SPANISH CHESTNUTS.

FIGS—Several finest sorts.

RHUBARBS—Linnæus, Giant, Victoria, and several new and fine English sorts.

FRUIT TREES FOR ORCHARD HOUSES.

DWARF MAIDEN TREES—Of Apple, Pear, Plum, Cherry, Apricot, &c., of the finest sorts for pot culture, or Orchard houses. Suitable selections made by E. & B. if desired.

ORNAMENTAL DEPARTMENT.

The stock of this department is the largest and best we have ever before offered, and embraces everything desirable, new and old, among

Deciduous Ornamental Trees,
Evergreen Trees,
Flowering Shrubs,
Climbing Shrubs,
Roses,
Pæonies,
Dahlias,
Phloxes,
Border Plants.

BULBOUS ROOTS—Summer flowering, including Amaryllis Gladiolus; Lilies, *Japan*, &c.; Tuberose, Tigridia, Tritonia aurea, Colchicum, &c.

STOCKS FOR NURSERYMEN.

PEAR SEEDLINGS, our own growth, 1 and 2 years.
MAZZARD CHERRY, 1 year.
MAHALEB CHERRY, 1 and 2 years.
QUINCE STOCKS, 1 year from cuttings.

For full and detailed information respecting the stock, prices, terms, &c., we refer to the following Catalogues, which will be sent gratis, pre-paid, to all who enclose one stamp for each:

No. 1.—Descriptive Catalogue of Fruits.
No. 2.—Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c., &c.
No. 3.—Descriptive Catalogue of Dahlias, Green-house and Bedding Plants, &c.
No. 4.—Wholesale Catalogue for Nurserymen, Dealers, and others, who purchase in large quantities.

ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, N. Y.

Ravenswood Fruit Nursery.

WHOLESALE & RETAIL.

BRINKLE'S ORANGE RASPBERRY.

LINNÆUS RHUBARB—(propagated exclusively from the roots,) at very low prices to the Trade and Market Gardeners.

DWARF PEAR TREES—Fine two year old trees of the best selected varieties.

REBECCA and DELAWARE, Diana, Concord, and Hartford Prolific Grape Vines.

NEW-ROCHELLE or LAWTON BLACKBERRY.

NEWMAN'S THORNLESS BLACKBERRY—Also CHERRY CURRANTS, STAWBERRIES, and other RASPBERRIES, &c.

We have a large stock of the above superior varieties and offer them to the Trade and Fruit Gardeners at very low prices. Circulars furnished on application. Address

H. C. FREEMAN, Ravenswood, L. I., near New-York.

All plants delivered at any part of New-York City free of charge.

FRUIT, SHADE, AND EVERGREEN TREES.—Stock for Nurserymen, Dealers and Planters.

☞Public Institutions, Cemeteries and Parks supplied on the most liberal terms.

☞Priced List and Descriptive Catalogues furnished on application.

DAVID J. GRISCOM,
Evergreen Nursery, Woodbury, N. J.

New-Rochelle (or Lawton) Blackberry Plants.

$50 per Thousand Plants.
$6 per Hundred do.
$2 per Twenty five do.
$1.50 per Dozen do.

CONCORD GRAPE VINES, Strong and fine $30 per Hundred.
DIANA do. $50 per Hundred.
ALLEN'S HARDY RASPBERRIES, $40 per Thousand.
BRINKLE'S ORANGE RASPBERRIES, $40 per Thousand.

GEO. SEYMOUR & CO., South Norwalk, Conn.

Lawton Blackberry,

Permanent, hardy, and singularly prolific in all climates—fine flavor and very large. My plants are carefully preserved from admixture with seedlings of the common New-Rochelle Blackberry. For sale in large or small packages.

WM. LAWTON, New-Rochelle, N. Y.

LAWTON BLACKBERRY PLANTS at greatly reduced prices, warranted genuine: 1000 plants, $40.00; 500 do, $20.00; 100 do. $5.00.

Also, 10,000 and upwards Albany Strawberry Plants at 75 cts. per 100. Orders solicited.

T. B. NASH, South Norwalk, Conn,

3000 RASPBERRY PLANTS FOR SALE, of the celebrated Allen variety, best berry ever known, superior to all others, wants no covering, is perfectly hardy in any climate. Price $3 per 100. Orders directed to C. SHERWOOD, Summit, N. J,

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W. T. & E. SMITH,

GENEVA NURSERY,

GENEVA, N. Y.

Take pleasure in offering for sale the following articles of Fruit and Ornamental Trees.

Apple, Standard Trees, 4 to 5 feet, cheap.
do do. 2 years old, 2½ to 4 ft., thrifty and fine.
Pears, Standard Trees, 3 to 5 ft, stocky and fine.
do. Dwarf Trees, 2 years from Trees.
Cherry, Standard and Dwarf, a large lot, cheap.
Peach Trees, 1 year old, thrifty and fine growth.
Blackberries, (Lawton and Highbush) good thrifty Plants.
Raspberries of all the leading sorts, also Doolittle's Improved Black New.
Grapes, New Sorts, Diana, Delaware, Concord, Hartford Prolific, Rebecca, Anna, &c.
Currants, A general collection of the best sorts.
Gooseberries of all the leading and best English sorts, including Haughton's Seedling, a variety that never mildews.
Strawberry Plants. Wilson's Albany (true). $1 per 100, $6 per 1000: Hooker's Seedling, Trollop's Victoria, Triomphe de Gand, and a general collection of the best sorts. Plants can be sent per express.

ORNAMENTAL TREES AND SHRUBS.

Of Norway Spruce, Balsam Fir, Arbor Vitæ, Mahonia, Aquifolia, Mountain Ash.
Roses, a fine collection of all the best and new sorts; Bulbous Roots; Hardy Border Plants. &c.
Greenhouse Plants, a fine collection of all the fine sorts.

SEEDLINGS.

Pear Seedlings, one year old, Imported this season in fine order. Pruned ready for planting, Price ....$12 per 1000
Cherry, Mazzard, 1 year old do.................. 4 per 1000
Apple, 1 year old.. 4 per 1000
Plum Seedlings, small size.

Catalogues of Wholesale and Retail sent on application by enclosing a stamp for each.

Address W. T. & E. SMITH.
March 1, 1860. Geneva, N. Y.

Walworth Nurseries.

Careful systematic effort, aided by much experience, directed to growing trees of superior quality; and extensive orchards now embracing 125 acres and 13,000 trees; furnishing a means of testing and comparing varieties; enable the proprietor to furnish trees of most desirable quality, as well as most profitable varieties for Orchard Culture. Large space is given to trees in the Nursery, thus rendering them *stocky* and *strong*.

A Dwarf Pear Orchard of over 3,000 trees, part of which are in successful bearing, has furnished much experience of great value to such as may wish to engage in that interesting department of fruit culture.

The present Nursery Stocks consist of a large and general assortment of Fruit and Ornamental Trees and Plants, while special attention is invited to his *large stock of Dwarf Pear Trees*, grown with special care, and thoroughly headed back so as to give them the best possible form for transplanting.

Trees packed in the best manner at moderate charge; Catalogues furnished on receipt of stamp. Also, Circular of *Yeoman's Fruit Bottles*. Terms advantageous to the buyer.

T. G. YEOMANS.

Walworth, Wayne Co, N. Y.

LARGE STANDARD PEAR TREES FOR SALE.

At our Nursery we have a quantity of extra large Pear Trees of the most approved kinds, very thrifty, and all of them have been trimmed and transplanted, and therefore have splendid tops and roots. We also have a quantity of Apple, Cherry and Plum Trees, and a variety of other trees, vines, Shrubs, &c., (as above,) for sale by

WICKHAM & BLOODGOOD,
Tioga, Tioga Co, Penn.

New-Canaan Nurseries.

The Subscribers offer for sale
20,000 Peach trees, Popular Varieties.
50,000 Sugar Maple Seedlings, 2 years in seed bed.
50,000 Elm do. do.
New-Canaan, Ct., Feb., 1860. STEPHEN HOYT & SONS.

Osage Orange for Hedge Fences.

1 and 2 years old. $3 and $4 per 1000; $25 and $30 per 10,000.

RHUBARB or PIE PLANT. $5, $6, and $8 per 100, according to kind—lower by the 1000.

Catalogues of all the extensive departments of these well known nurseries, gratis—a one cent stamp for postage.

Germantown Nurseries, near Philadelphia
THOS. MEEHAN, Proprietor.

Allen Raspberry, Wilson's Albany Strawberry, Lawton Blackberry &c

Another year's trial has proved the Allen Raspberry not only *perfectly hardy*, but more productive than any other Raspberry we raise. They have given perfect satisfaction, so far as we have been able to learn, to growers in New-England, New-Jersey, and other localities, where the Hudson River Antwerp has proved worthless. The fruit is large and firm, and the flavor very fine.

Price $1 per doz.; $5 pr. 100; $40 pr. 1000 plants.
Also Hudson River Antwerp, $2 pr. 100; $15 pr. 1000.
Fastolf, 75 cts. pr. doz; $4 pr. 100.
Lawton Blackberry, $1 pr. doz: $3.50 pr. 50; $6 pr. 100.
Wilson's Albany Strawberry, *Extra strong plants*, $10 pr. 1000; $70 pr. 10,000.
Large Early Scarlet, $1 pr. 100; $8 pr. 1000.
Moyamensing (late), $1 pr. 100; $8 pr. 1000.
Longworth's Prolific, $1.50 pr. 100; $10 pr. 1000.
River's Eliza, $1.50 pr. 100; $10 pr. 1000.
Red Dutch Currants, good 1 year old plants, $4 pr. 100; $30 pr. 1000.
Do. do. 2 and 3 do. $6 pr. 100; $40 pr. 1000.
Black Naples Currant, $1 pr. doz.; $8 pr 100.
Also, Strong one year old Asparagus-Roots, $10 pr. 1000.
Poughkeepsie, N. Y. H. & J. CARPENTER

The Allen Raspberry.

Will be sent after 1st April next, well packed, by express, at $1 per dozen, $4 per hundred, $25 per thousand, on receipt of orders, enclosing the money. LEWIS F. ALLEN.
Black Rock, Erie Co., N.Y. March 1, 1860.

ALLEN RASPBERRY PLANTS,
(Warranted true.)

$30 for 1000; $4 for 100; $2.50 for 50; $1 for 16 plants. Address JOHN GOMAN, Jr., 81 Murray st, New-York, or GEO. W. TAYLOR, West Bloomfield, N. J.

NANSEMOND SWEET POTATOES for Seed, put up carefully in new barrels, at $5 a bbl. ☞Order directly from the grower. Plants in their season. C. B. MURRAY, (late O. S. Murray & Son,) Foster's Crossings, Ohio.

Isabella and Catawba Grape Vines

☞MADE FROM FRUIT WOOD ALONE,☜

OF proper age for forming Vineyards, cultivated from and containing all the good qualities which the most improved cultivation for over twenty years has conferred on the Croton Point Vineyards, are offered to the public. Those who may purchase will receive such instructions for four years, as will enable them to cultivate the Grape with entire success, provided their locality is not too far north.

The past season, though the coolest and most unfavorable for grape maturing we have had in many years, the subscriber ripened his whole crop,—proving that his Isabellas and Catawbas have become perfectly acclimated. This gives him full assurance, that by improved cultivation, pruning, &c., a crop of good fruit can be obtained EVERY YEAR, in most of the Northern, all of the Middle, Western, and Southern States.

N. B. To those who take sufficient to plant six acres, as he directs, he will, when they commence bearing, furnish the owner with one of his Vinedressers, whom he has instructed in his mode of cultivation, and he will do all the labor of the vineyard, and insure the most perfect success. The only charge, a reasonable compensation for the labor. When the purchase is large, and approved paper or other security can be offered, a liberal credit on most of the purchase will be given.

Also, APPLE-QUINCE TREES, (which are sometimes called the Orange Quince,) for sale as above. R. T. U.

Also for sale at his PURE WINE AND GRAPE DEPOT, (No. 7 Clinton Hall, Astor Place, N. Y. City), Isabella and Catawba Wine in their PURITY.

All communications addressed to R. T. UNDERHILL, M.D. New-York. or Croton Point, Westchester Co., N. Y., will receive attention.

Iona Vines and Plants.

The subscriber's Catalogue, which is a treatise on the management of the vine, with numerous engravings, will be sent to applicants who enclose two three-cent stamps.

A fine stock of Delaware vines of unequalled quality, for sale singly or in quantity.

Wholesale Catalogue for dealers.

Clubs supplied at a discount.

C. W. GRANT,
Iona, near Peekskill, Westchester Co., N. Y.

P. S.—A good stock of Concord Vines for vineyards or gardens.

☞The Work on the Vine of F. Reubens, translated by Dr. Chas. Siedhoff, with additions by C. W. Grant, is in Press, and will be published in a few days.

It is profusely illustrated with engravings.

New Hardy Grapes.

We are prepared to furnish one year old vines, (true to name) of most of the New varieties of Grapes. Also New Rochelle or Lawton Blackberry; Wilson's Albany, Hooker and Chilian Strawberry Plants. Priced Catalogues sent free to applicants.

HOAG & CRAINE, Lockport, N. Y.

ISABELLA GRAPE VINES, large size, for Arbors, for sale at $1 each, by
THOMAS S. FLETCHER, Delanco, Burlington Co., N. J.

Iona Grape Vines.

The subscriber has accepted the agency for the sale of C. W. Grant's Iona Grape Vines, and will keep a good supply constantly on hand at the Brooklyn Nursery, Gates Avenue, near Myrtle Avenue, Brooklyn, L. I. Catalogues sent to applicants who enclose one three-cent stamp.

Also C. W. Grant's large Catalogue to those who enclose two three-cent stamps.

Vines wholesale and retail. Clubs liberally dealt with, etc.

ANDREW S. FULLER.

Grafts Vines, and Plants.

By Mail, post-paid. See advertisement in Feb. No.
F. A. ROCKWELL, Ridgefield, Conn.

LAWTON BLACKBERRY PLANTS.

Circulars free. WM LAWTON, New-Rochelle, N. Y.

BELL CRANBERRY PLANTS.
NEW-ROCHELLE (Lawton) BLACKBERRY.
HOP TREES, all of which are reliable, and at lowest prices.

Circulars relating to culture, soil, price, &c, will be furnished gratis to applicants. Also

Brinckle's Orange, Red Antwerp, Black Cap, Franconia, and other varieties of RASPBERRIES.

Delaware, Logan, Rebecca, Diana, Concord, Hartford Prolific, Isabella, Catawba, and other varieties of GRAPE VINES, with a full assortment of

TREES. PLANTS. ROSES, VINES, &c.

2,000 Norway Spruce and Arbor Vitæ. 8 to 12 feet high, handsome form—it is said by others to be the finest lot in New-England—and at less prices. F. TROWBRIDGE & CO.

New Haven, Conn., Feb., 1860.

CRANBERRY CULTURE.—The Subscriber has issued a Circular on the CRANBERRY AND ITS CULTURE, and will forward them to all who send a postage stamp to prepay postage. Also has the PLANTS FOR SALE, and will send them in a fresh state, by Express, to all parts of the United States. Address,

SULLIVAN BATES,
Bellingham, Norfolk County, Mass.

THE PERFECTED TOMATO.

Pomo D'oro Lesteriano.

This new species of Tomato—which has been brought to perfection by C. Edwards Lester, Esq , after many years of experiment, in Italy and the United States—has been pronounced by Agricultural Fairs, Farmers' Clubs, Horticulturists. Chemists and Epicures, to be in all respects superior to any other species. It excels in size, delicacy of flavor, thinness of skin, fewness of seeds, solidity of meat, prolific bearing, and ease of culture. It matures quicker, and hangs longer on the vine than any other.

We have a small supply of seeds saved by Mr. Lester last season.

Price, per packet, containing 24 seeds, 25 cts

If ordered by mail, a three cent stamp must be added for return postage. J M. THORBURN & CO.,
15 John-st., New-York.

Seed Peas.

Cedonulli and Black-eyed Marrowfats for sale by
R. A. GOODENOUGH, 37 Pearl-st., New-York.

FIVE
Splendid Strawberries.

HOOKER—Very productive; large, beautiful, and of UNEQUALED QUALITY.

WILSON'S ALBANY—Exceedingly productive; FINE FOR MARKET.

TRIOMPHE DE GAND—IMMENSE SIZE; splendid appearance, and high flavor.

PYRAMIDAL CHILIAN—Very handsome, productive, hardy, and good flavor.

LARGE EARLY SCARLET—THE EARLIEST; productive, and excellent.

As it is impossible to secure all the excellences of this most popular fruit in one variety, we offer the above as comprising, in five sorts, the various points desirable.

We again confidently RECOMMEND the HOOKER, as by far the best for family use, if only one sort is to be planted—combining a greater number of excellences than any other variety.

☞All of the above have perfect flowers, and will produce excellent crops, if planted singly or together.

PRICE—(Securely packed to be forwarded by express:)

Per 100	plants	of any of the above varieties	$2.00
" 100	"	20 of each variety	3.00
" 500	"	100 of each variety	7.50
" 1000	"	of the Hooker	10.00

H. E. HOOKER & CO.,
COMMERCIAL NURSERIES,
Rochester, N. Y.

The following are some of the distinguishing points of the "*Hooker*," which originated in our Nurseries.

The plant is very vigorous and hardy;

It is extremely productive;

It is of the largest size;

It is very dark colored; flesh, also deeply colored;

It is the only large and productive Strawberry, which has also high flavor and quality; it is for the combination of these points that we claim its superiority;

It is excellent for preserving—retaining its high, rich color, when preserved;

It has perfect flowers—and consequently requires no other variety planted near to fertilize it.

Our nurseries were established in 1830; and rank now among the most extensive in the United States—occupying 200 acres. They are planted exclusively with Nursery productions, embracing every variety of Fruit and Ornamental Trees, Shrubs, Small Fruits, Roses, &c., &c.

Strawberry Plants.

Wilson's Albany Seedling, and all other varieties of choice Strawberries, packed to go to any part of the country.

Lawton or New-Rochelle Blackberry Plants.

Rhubarb Roots; Asparagus Roots.

Raspberry Plants of all good varieties.

Fruit and Ornamental Trees and Shrubs, Evergreens, and all kinds of Plants sent to order, carefully packed,

R. L. ALLEN, 191 water-st., New-York.

New and Valuable Squashes.

Seeds of the

Honolulu	Per pkt	25c.
Golden Green Japan	do.	25c.
White Leghorn	do.	25c.
Mammoth Cuba	do.	25c.
Mammoth Chili	do.	25c.
Imp'd Lima Marrow	do.	25c.
Sandwich Island	do.	25c.
Hubbard, per lb , $1.50, per oz		20c.
True Seven Year Pumpkin	Per pkt	25c.

TREE AND SHRUB SEEDS.

Norway Spruce	Per lb	75
European Silver Fir	do.	$1.00
Balsam Fir	do.	3.00
Hemlock Spruce (clean seed)	do.	6.00
American Arbor Vitæ (clean seed)	do.	6.00
Chinese do.	do.	3.00
Stone Pine	do.	1.50
Black Austrian Pine	do.	3.00
Scotch Fir	do.	1 50
Scotch Larch	do.	3 00
American Bald Cypress (beautiful), per qt		30
Strawberry Tree (*Arbutus Unedo*) per oz		40
Hop Tree, per oz		25

Tree Seed Catalogues on application to
J. M. THORBURN & CO.,
15 John-st., New-York.

The Hubbard Squash.

Having given the Hubbard Squash it's name, and having been the first to introduce it to public notice. I offer the purest seed raised at 12 cents for a package of 50 seed, post paid, or $2.25 for one pound of seed, post paid, to any part of the United States—California and Oregon an extra dollar. Seed dealers supplied at a discount. It is recommended by Hon. Marshall P. Wilder, Hon. Edward Everett, the keepers of the principal hotels, seed dealers, and the whole Agricultural Press of New-England, as the sweetest, dryest, and richest flavored of all winter squashes. It has succeeded admirably in New-England, the West, in New-York, and in other States.

JAMES J. H. GREGORY, Marblehead, Mass.

HUBBARD SQUASH, WARRANTED PURE. Packets containing 50 SEEDS will be sent to any address in the Union on receipt of *five three cent stamps.*

100 Seeds for nine three cent stamps.

Please address B. K. BLISS,
Springfield, Mass.

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50 Seeds of the celebrated Hubbard Squash, post-paid, for 15 cents. P. SUTTON, Ransom, Luzerne Co., Pa.

Garden Seeds. Garden Seeds.

BY MAIL. POST-PAID.

The following varieties of Vegetable Seeds, such as

Beets, early and late.		Onions, of different kinds.	
Cabbages,	do.	Melons,	do.
Carrots,	do.	Tomato,	do.
Cucumbers,	do.	Spinach,	do.
Lettuce,	do.	Cauliflower,	do.
Radishes,	do.	Celery	do.
Squash	do	Parsley,	do.
Turnip	do.	Parsnip	do.

raised by the subscriber, and warranted of the best quality, put up in the usual style, will be sent by mail, POSTAGE PAID, at FIVE CENTS per paper. G. R. GARRETSON,
Flushing, Long Island, N. Y.

JOSEPH E. MACOMBER, Wholesale Vegetable Seed raiser, Portsmouth, R. I.

Rare and Beautiful Flowers.

B. K. BLISS, SEEDSMAN AND FLORIST,
SPRINGFIELD, MASS.

WOULD respectfully inform his friends and patrons that his new descriptive catalogue of FLOWER AND VEGETABLE SEEDS will be ready for delivery in February, and will be mailed to all applicants enclosing a three-cent stamp. Much pains has been taken in preparing it, and it will contain, in addition to the information usually found in such lists, many descriptive and cultural notes for the benefit of the amateur and unprofessional florist.

It will embrace all that is new and most desirable among Annuals, Biennials, Perennials, and Green House Seeds, alike suitable for the Flower Garden, Pleasure Grounds, Lawns, Shrubberies, and the Conservatory, as well as many matchless novelties of the highest merit, which have been selected by his European correspondents from the most reliable sources.

COLLECTION OF FLOWER SEEDS BY MAIL, POST-PAID.

The following collections have been sent out from his establishment for the past six years, and are now favorably known in every section of the country.

ASSORTMENT No. 1—Contains twenty choice varieties of Annuals—$1.00.

ASSORTMENT No. 2—Contains twenty choice varieties of Biennials and Perennials—$1.00.

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The Seeds contained in the above assortments are of his own selection. Purchasers who prefer to make their selection from the Catalogue, will be entitled to a discount proportionate to the quantity ordered.

☞All orders must be accompanied with the Cash, which can be remitted in current bank bills or postage stamps.

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New and Rare Flower Seeds.

Callirhoe pedata	Per pkt	25c.
Acroclinium roseum	do.	10c
Alonsoa Warscewicsii	do.	10c.
Clarkia pulchella Var integripetala	do.	25c,
New Auricula flowered Sweet William	do.	25c.
Dianthus Heddewigi	do.	50c.
Dianthus Chinensis laciniatus	do.	50c.
Guttiernezia gymnospermoides	do.	10c.
Ipomea tricolor	do.	10c.

with hundreds of other new varieties for which see our Flower Seed Catalogue.

Also assortments containing

5 Beautiful varieties of Phlox Drummondii for		40c.
7 do. do.	Portulaca	35c.

J. M. THORBURN & CO.,
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TO ALL LOVERS OF FLOWERS.

Fifty flowering plants and Twenty-five varieties of flower seeds for *Five Dollars*, package included.

The undersigned having a large stock of bedding out plants is prepared to distribute them as above. The collection will consist of the most showy and best varieties for giving a continuous display of flowers during the Summer and Fall, together with a selection of twenty five different kinds of flower seeds of the most popular sorts. This is a favorable opportunity for parties unacquainted with the names of plants, to obtain a supply of useful and showy varieties for a small outlay.

Persons desirous of obtaining this collection, will please send their orders early, as they will be sent out in strict rotation on and after the 1st of April. Cash must invariably accompany the order. SPECIAL TERMS TO CLUBS.

Parties forming clubs for ten collections, to be sent to one address, will receive one collection over This will be a rare chance for any one having a circle of floricultural friends, to obtain a collection free JOHN HENDERSON,
Washington Nursery, Jersey City, N. J.

BEAUTIFUL FRENCH HYBRID GLADIOLUS.

We have just received fifty named varieties of the above species

Price from 15 cts. to $1.50 each.

Also

All other varieties of Gladiolus,
Jacobean Lilies,
Tuberoses,
Tiger Flowers,
&c. &c. &c.

For which see our Flower Seed Catalogue.

J. M. THORBURN & CO.,
15 John-st., New-York.

Flower Seeds. Flower Seeds.

BY MAIL POST-PAID OR OTHERWISE.

The subscriber has for many years past spared no pains or expense in procuring both in Europe and this country every variety of *Annual Flower Seeds*, that could be obtained, and after cultivating over one thousand varieties, has selected about one hundred kinds with a view of including all the most desirable for hardy garden cultivation, a list of which will be sent to any one. And for $1 THIRTY-THREE KINDS of any on the list will be sent by mail, postage-paid. G. R. GARRETSON,
Flushing, Long Island, N. Y.

Flower Seeds by Mail.

Flower Seeds by Mail.

Our own selection of

25 Varieties for	$1.00
50 do.	2.00
100 do.	4.00

Persons ordering either of the above assortments may rely upon a beautiful collection.

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Flower Seeds by Mail.

Connecticut Seed Leaf Tobacco.

Packets containing half an ounce (8000 seeds) sent to any address in the Union post-paid, on receipt of *nine three cent stamps.* This seed was raised by one of the most successful growers in Connecticut, and is guaranteed to be of the very best quality.

Address B. K. BLISS,
Springfield, Mass

Japan Apple Pie Melon.

Packets containing 30 SEEDS, with directions for use, will be sent by mail post-paid to any part of the Union on receipt of *nine three cent stamps.*

Please address B. K. BLISS, Springfield, Mass.

Seeds. Seeds. Seeds.

I am now supplied with one of the largest and most complete assortments of GARDEN, FIELD, GRASS, FLOWER, and FRUIT SEEDS ever offered to the public. My stock has been made up with much care. A large portion are of home growth, being grown expressly for me, which I can recommend as true to name, and of the best quality. Care has been taken to have them perfectly clean.

Among my assortment may be found all the improved varieties of CORN for Garden and Field culture.

BEANS—Early Bush and Snap shorts.
Large Lima and Horticultural Pole Beans.

CABBAGE—Both early and late of American growth

CARROT—Early Horn, Long Orange, Altringham, White Belgian, of American growth.

TURNIPS—Early Dutch, Red Top, Strap Leaf, Long White French, White Globe, Yellow Aberdeen, Purple-top Ruta-baga, all of American growth.

SQUASH—Hubbard and Boston Marrow, &c.

PEAS—Epps Monarch, Lord Raglan, Eugenie, Competitor, Sebastopol, Sangster No. 1, Tom Thumb and all other varieties.

POTATOES, early, and for general crop.

OATS—Choice varieties, both American and imported.

SPRING WHEAT—Canada Clubb, China Tea, Golden Drop or Scotch Fife.

SPRING RYE—SPRING BARLEY.

CLOVERS—White Dutch, Lucerne, Trefoil, Large Red, Medium Red.

GRASS SEEDS.—Timothy, Hungarian, Creeping Bent, Red Top, Orchard, Blue, Fowl Meadow, Rye or Ray, Green, Sweet Vernal, Sanfoin, Fescue, Fine Mixed Lawn.

SPRING VETCHES OR TARES, Chinese Sugar Cane; Tobacco—Connecticut Seed Leaf, Grafting Wax, Bass Matting, Cotton Seed, Sunflower, Whale Oil Soap, Bird Seed, Flax, Broom Corn, &c

Catalogues furnished on application.

R. L. ALLEN, 191 Water st., New-York.

BRIDGEMAN'S
HORTICULTURAL ESTABLISHMENT,
Nos. 876 & 878 BROADWAY,
NEW-YORK.

SEEDS. SEEDS. SEEDS.

The subscriber has now on hand a full supply of GRASS, VEGETABLE, HERB, and FLOWER SEEDS, embracing the old favorites, and including several new varieties of superior excellence. For sale (at the lowest market price), for quality and quantity, or in packages for retail trade.

New Catalogues furnished on application.

Also an assortment of HORTICULTURAL IMPLEMENTS, AGRICULTURAL AND HORTICULTURAL BOOKS.

All orders attended to promptly, and with exactness.

ALFRED BRIDGEMAN.

BLISS'S COLLECTION OF VEGETABLE SEEDS.

The following collections, comprising every desirable variety in cultivation, have been sent out by us for three years past, and are now favorably known in various sections of the Union.

No. 1—COMPLETE COLLECTION—Sufficient for a large garden for one year's supply—comprising twelve quarts of Peas of the very best sort for succession—6 varieties each of Beans, Cabbage, Turnips, Corn, and all other Vegetable Seeds in proportionate quantities, for a full supply..$10.00

No 2—COMPLETE COLLECTION for a moderate sized garden, comprising 6 quarts of peas, and most of the other varieties in proportion.......................$5.00

No. 3—COMPLETE COLLECTION for a small garden..$3.00

The quantities included in the above collections will be found detailed at length in the Catalogue, which will be forwarded to applicants on receipt of a Postage Stamp.

All orders must be accompanied with the Cash or a satisfactory reference.

B. K. BLISS,
Springfield, Mass.

SPRING GARDEN SEEDS.

The most complete assortment ever offered to the public.
Also
Kentucky Blue Grass.
Orchard Grass,
Timothy,
Red Top,
Rhode Island Bent Grass,
English and Italian Rye Grass,
White and Red Clover,
Lucerne.

SEED POTATOES, a choice assortment.

For descriptions and prices send for our Catalogues.

J. M. THORBURN & CO.,
15 John-st., New-York.

TO WHOLESALE DEALERS IN GARDEN, FIELD, and GRASS SEEDS.—I have taken the greatest care in raising and selecting a large and pure stock of every variety of Seeds required by the Gardener, Farmer, and Planter, and purchasers may depend on their being fresh and true to name.

Sales will be made in bulk, by the ounce, pound, quart, bushel, or in papers distinctly labeled.

My Seed List contains all the old varieties, and many new kinds, all of the very best quality, and chiefly raised for me.

FRUIT SEEDS—Apple, Pear, Quince, Plum, Apricot, Cherry, Currant, Gooseberry, Raspberry, Strawberry, Peach, &c.

HEDGES—Honey Locust, Yellow Locust, Buckthorn, Osage Orange, Arbor Vitæ, &c.

BOOKS—All works furnished at publisher's prices.

My prices are as low as any others for the same quality of seeds.

Orders by mail will be attended to with exactness and promptitude.

R. L. ALLEN, 191 Water-st, New-York.

Grass, Field, and Garden Seed.

We have just received our NEW stock of GRASS, FIELD, and GARDEN SEEDS, to which we call the attention of purchasers and consumers. All seeds warranted pure and fresh.
"Send for our list."

A. F. MAYHER & CO.,
Importers, Growers, and Dealers in Seeds,
No. 51 VESEY ST., New-York.

"Remember new stand, No. 51 VESEY-ST."

Pear Seed!! Pear Seed!!

We have still on hand a small quantity of warranted

Pear Seed (Imported)................................	$1.50 per lb.
Apricot Pits..	75 "
Apple Seed, per bushel............................	7.00

J. M. THORBURN & CO.,
15 John-st., New-York.

EARTH ALMOND—SOUCHET—CHUFA.

(*Cyperus esculentus.*)

These edible roots, which were recently introduced from the south of France, have now been proved to be of great value in all parts of our country. In France they are eaten just as we use pea-nuts. They are very sweet and pleasant, much liked by children, and sought after with avidity by hogs and other animals. An orgeat, (drink) of very pleasant flavor is there manufactured from them, and also an oil is extracted from them. They should be planted early in Spring, in light and moist soils well pulverized, in drills fifteen inches apart and about three inches in the row. They need but little hoeing, as they spread and cover the ground. The produce is very great, being usually three or four hundred for one, and the roots are formed in such masses that they are readily collected. The crop should be gathered before the ground freezes, and stored in cellar for Winter use. There is probably no root that can be grown so profitably for a hog pasture, the hogs to be turned into it in September or October.

They will be furnished at $1 per lb., or 25 cts. per 100 roots: For $1, I will send 200 roots by mail, post-paid.

Seeds.—GARDEN, VEGETABLE, AND FLOWER SEEDS of all kinds, have been largely grown by the subscriber for more than thirty years past. He has now nearly one hundred acres devoted to this purpose, and can furnish seeds of all descriptions, of the choicest kinds, and *purest quality*, at the lowest prices, and in any quantity desired.

G. R. GARRETSON, Flushing, Long Island (N. Y.)

Marblehead Drumhead.

This Cabbage is by far the most popular kind sold in Boston Market. It originated in Marblehead, Mass., and holds the same rank among cabbages, as the Hubbard squash among squashes, being distinguished for its reliability for setting a symetrical head remarkably hard and heavy. It is early, very fine grained, and sweet, with a stump, when properly cultivated, of but one to two inches in length. Under fair cabbage culture ninety-five per cent will set good heads to the acre; under good culture, frequently every plant on an acre will set a marketable head. A package of the best variety of this cabbage, the Stone-Mason, containing seed more than sufficient to raise a Winter's supply for one family, forwarded post-paid to any part of the United States, California and Oregon excepted, for 25 cts. One pound of seed forwarded, post-paid, on the receipt of $1.00, or for $3.00 to parties paying their own freight. ☞ If this Cabbage does not prove itself to be what I recommend it, the money will be returned, as I aim to introduce no product new to the public that will not be a full return for the money they invest. I will give five dollars to any person for one ounce of seed of any Drumhead Cabbage, that will excel this variety in the above named traits. Any person desiring to procure a package of the Marblehead Mammoth Drumhead Cabbage, can obtain it at the same price. This is the largest cabbage in the world averaging, as grown by Marblehead farmers, 30 lbs. per head by the acre, and sometimes reaching 60 lbs. a head, and measuring nearly six feet around the solid head.

JAMES J. H. GREGORY, Marblehead, Mass.

Dwarf Broom Corn Seed.

The undersigned offers a very desirable variety of Dwarf Broom Corn Seed for sale, the stalks of which, on an average, are not more than eighteen inches to two feet high to the brush, and the brush is of about the same length The whole plant being only 3 to 4 feet high. The broom is far superior to the old tall variety, being much finer in fibre and much more elastic. It will yield fully twice the amount of brooms from an acre of land than the old tall variety does. On account of its dwarf habit it bears closer planting, and will resist the severest storm, and is never blown down. The brush is wrapped up about half its length in the top leaf, which obviates it from bending down, and consequently keeps the broom straight. This Dwarf variety will prove indispensible to all cultivating this valuable crop. Price 15 cents per ounce package, or $2 per lb. Sent by mail post-paid. Address

E. B. GOOD,
Manchester, York County, Pa.

QUEEN'S SEEDSMEN.

Peter Lawson & Son,

LONDON—27 Great George St. Westminster, S. W.
EDINBURGH—1 George IV Bridge.

On account of the numerous applications which have been made to Peter Lawson & Son, to send their List of Seeds and Nursery Produce to the United States and Canada, they beg leave to inform the Trade in America that they are prepared to furnish them with

PRICE LISTS,

and to assure them that any orders they may be favored with will receive their best attention.

All orders must be accompanied by CASH, satisfactory references in England, or may be forwarded through

CRAIG & NICOL,
No 6 Bowling-green, New-York.

NEW-YORK AGRICULTURAL IMPLEMENT,
Machine, and Seed Warehouse.
R. L. Allen, 191 Water-st., N. Y.

The attention of Farmers, Merchants, and all interested, is invited to my large and unequalled assortment of Agricultural and Horticultural Implements and Machines.—The greatest care in the selection of articles I offer for sale, to have them of the best and most approved patterns, and that they be made in the most substantial manner.

I particularly call attention to my superior Burr Stone and Iron Grain Mills, Horse-Powers, Threshers, Mowing and Reaping Machines, Saw Mills, Corn Shellers, Hay, Fodder, and Stalk Cutters, Presses, Pumps, Brick Machines, Carts and Waggons, Cotton Sweeps, Cultivators, Harrows, Plows of every variety, Garden Tools, &c.

FERTILIZERS—Peruvian Guano, Bone Dust, Phosphate of Lime, Dried Blood and Wool, Plaster, &c.

Orders solicited for the above, and for STEAM ENGINES and MACHINERY OF ALL KINDS, which shall receive prompt attention, and be filled on our best terms.

AGRICULTURAL AND HORTICULTURAL IMPLEMENTS, the latest improved.
FIELD and GARDEN SEEDS, from the most reliable growers, warranted pure.
No. 1 PERUVIAN GUANO.
SUPERPHOSPHATE OF LIME
BLOOD AND WOOL MANURE.
BONE DUST, LAND PLASTER,
POUDRETTE, &c.

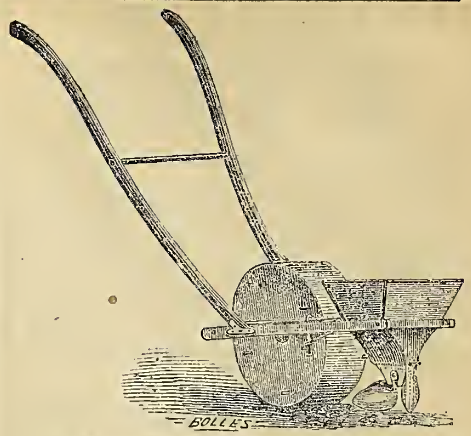
Sold by GRIFFING, BROTHER & CO.,
60 Cortlandt-st., New York.

Iron Amalgam Bells,

FOR SCHOOLHOUSES, CHURCHES, FACTORIES, SHOPS, HOTELS, FARMS, &C.,

only one third price of Brass Composition Metal, with tone equal. Prices: 50 lbs. Bell $6; 75 lbs $10; 100 lbs. $15; 150 lbs. $20.—Each has yoke and standard and crank. 300 lbs. $35; 400 lbs. $50., has wheel added. On receipt of price will deliver to Railroad, Steamboat, or Express Co marked any address.

M. C. CHADWICK & CO., No. 17 Spruce-st., New-York.



Wethersfield Seed Sower.

ATTENTION

SEEDGROWERS, GARDENERS, AGRICULTURISTS,

AND DEALERS IN

Agricultural Implements!!

The above machine is the invention of T. B. ROGERS, of Wethersfield, Conn., (a place celebrated as a great Seed-growing town) and where large numbers of root crops are cultivated. It is there extensively in use.

It was Awarded the Highest Premiums at the Connecticut State and Hartford County Fairs.

COMMENTS OF THE PRESS.

Just the implement which farmers and market gardeners have long needed. Every kind and size of seed is sown. Even parsnip seeds which have baffled every machine hitherto used, are scattered by Mr. Rogers' implement with just as much precision and evenness, as any other Seed.—*Homestead Agricultural paper.*

The labor in working is just about equal to trundling an empty wheelbarrow.—*Christian Secretary.*

It is equally well adapted to large or small seed of regular or irregular form. It sows beans with perfect regularity, and can be changed in an instant for the sowing of cabbage, mustard, or any other seed. Nothing comes amiss to this implement. It makes the drill in the soil, deposits the seeds, covers them, and rolls the surface, all as it goes along. IT IS PERFECT; and ALL JUDGES present at the trial, AGREE UPON THIS POINT.—*Hartford Times*

Its great advantages are, that it lays the seed with perfect regularity, never crowding any, nor leaving blank spaces, and that no seed can by any means fall from it when it is not in motion. *Hartford Courant.*

It sows as fast as a man can walk.—*Homestead Agricultural paper.*

It does better work, and faster, than seed drills that sell at double its price.

For particulars send for a circular. Dealers supplied at the usual discount. Their orders should be forwarded immediately, as the supply may be short this season. No implement dealer should allow any time to pass, without ordering from 12 to 500, according to the largeness of his market. Price $8.

RODNEY KELLOGG,
General Agent of the United States,
201 & 205 Commerce-st.,
February, 1860. Hartford, Conn.

Farmers Read! Farmers Read!!

The best of all modern inventions is "Share's Coulter Harrow, Pulverizer and Grain Coverer," which was used last season with *grand success* by very many of the best farmers in this country, and pronounced *Excelsior*. The price is only $15, and it weighs 185 lbs., and draws lighter than a common harrow. Farmers having "Corn Stubble," or Fall plowed land of any kind, who use this machine, do not require to use the Plow in the Spring, as it answers for the Plow, Cultivator and Harrow Combined. This Coulter Harrow will save its cost in a week's work in time alone. For Particulars address

WM. W. EGGLESTON,
Dealer in Seeds and Implements, Albany, N. Y

EXCELSIOR BURR STONE
Farm and Plantation Mill.

AGENCY NO. 45 GOLD-ST., N. Y.

The experience of the past year has tested the value of the above invention, and proved that it is *the* Mill of the age, and best entitled to public confidence; that it is bound to supersede those now in use, on account of its intrinsic worth.

For hulling Buckwheat it is superior to all other inventions; and for grinding middlings, no other mill can compare with it.

One half the power required to run the ordinary Burr Stone Mill, will drive this, and at the same time do as much and as good work!

Descriptive circulars sent by

J. A. BENNET, Sole Agent.

HAY—HAY—HAY.

INGERSOLL'S IMPROVED PORTABLE HAY PRESS, for packing *Hay, Cotton, Rags, Hemp, Broom Corn*, &c., &c., 700 of these machines having been sold during the last three years, letters from every State in the Union testify to their *superiority, convenience* and *economy*.

Price. *Hay Press No.* 1, $50; wt. of bale 150 to 200 lbs No. 2 $75; wt. of bale 250 to 300 lbs. Cotton Press, $150. Any sizes and for any purpose of packing, made to order and delivered on shipboard in New-York. Address for Circulars or Machines FARMERS MANUF'G CO., Greenpoint, Kings Co., N. Y.

HAY PRESSES.

HAY PRESSES of every description, also *Horse Powers and Threshers* at

A. F. MAYHER & CO'S
Agricultural and Seed Store,
Remember No. 54 VESEY-ST. No. 54 Vesey-st., N. Y.
"Send for our circular"

EAGLE CORN SHELLER.—This I consider the best hand Corn-Sheller made. It works easily, shells rapidly and perfectly clean. Price $10. Also double, to be worked by hand or horse-power. Price $18. For sale by

R. L. ALLEN, 191 Water-st., New-York

THE PEOPLE'S MILL.

SANDFORD'S PATENT.

A FARM MILL, Portable, Simple, Compact, and made on an entirely new principle, with plates having a reciprocating and oscillating, instead of a *rotary* motion, with all the power applied within one inch of the center of the shaft, and one that has been fully tested and improved by two years' experience, is now offered to the public. Every Mill is tested, and no one is sent out unless it will grind a bushel of hard Corn fine enough for stock feed in *eight minutes;* many kinds of Grain it will grind much faster.

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WITH

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We would call the attention of Guano Dealers, Planters, and Farmers to the article which we have on hand and for sale at

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A new and valuable Fertilizer, containing a large proportion of nitrogenous matter. Bone Dust—Fine ground Bone Sawings and turnings and coarse bone for graperies—warranted a pure article. R. L. ALLEN.

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Agriculture at Yale College.

The Lectures and Discussions at Yale College are in progress as we close up this number. We at first intended to give a pretty full report, but it would be useless to attempt this, as will be seen when we state that the *daily* exercises consist of a discussion from 9 to 11 o'clock A. M.; a lecture of an hour or more at 11; a lecture at 2½ P. M.; another at 3½, and a meeting for discussion in the evening. The lectures are mostly given by leading practical men in the various departments of farming, fruit culture, stock raising, etc. We consider this the most important gathering ever assembled in our country, so far as general agriculture and its cognate pursuits are concerned. The enterprise when first proposed, struck us as a noble one, and it is proving quite as successful as its originators and promoters could have hoped. Its influence will tell upon the future. We could wish that there were a thousand times as many farmers present to participate in its advantages. We doubt not this will be a permanent Institution at Yale College, and also the precursor of others of a similar character. Though our readers do not get a formal report, they will derive at least some advantages in the suggestions appearing from time to time in various articles in this journal.

VALUABLE SEED PREMIUMS.

FOR THE MONTH OF MARCH.

In procuring our seeds for distribution this year, we provided an extra quantity, to be offered in special Premiums, as a remuneration to those who will, during this month (March,) assist in extending the circulation of the *Agriculturist*. Thus:

☟ ☟ ☟ ☟ ☟ ☟ ☟ ☟ ☟

After March 1st, any one sending the name of a *new* subscriber for the present Volume, may select from our general list of Seeds (on page 90) an assortment of **Fifteen Packages,** for his or her own use, in addition to the usual four or five packages for the subscriber.

☝ ☝ ☝ ☝ ☝ ☝ ☝ ☝ ☝

The seeds may be called for at our office, or they will be forwarded by mail, if the amount of postage be furnished, as indicated against each kind (on page 90.) (Large lots may sometimes be sent cheaper by express.)

This premium is offered for each *new* subscriber sent at the published rates, whether single names at $1 each, or at club prices for additions to clubs already formed, or for members of new clubs. (Of course, these seed premiums are not given where the other premiums (page 89) are paid.

Here is a good opportunity for any one to get a fine lot of Seeds at barely the cost of carriage, by mail or otherwise. *Each* new name will secure fifteen parcels. A club of six (for $5) will secure ninety parcels; a club of ten (for $8) 150 parcels (two or more of each kind); a club of fifteen (for $12) 225 parcels, and an extra copy; and so on for higher numbers.

These seeds are fresh, and of pure quality. The flower seed parcels and some others, each contain enough for a small plot. The heavier kinds, such as corn and peas, are made as large as they can go under letter postage. Each kind is put into a separate paper seed-bag, duly labeled and numbered.

Whether this premium will be offered beyond the present month (March), will depend upon how our stock of seed holds out. Many of the seeds were imported direct from Europe, and we cannot get a second lot in time for this season's planting. We will reserve a small supply, at least, for those at a great distance, who cannot get this paper in time to secure and send in names before the close of March.

N. B.—As a few of the varieties, that chance to be most called for, may run short, those applying for seeds will do well to prepare one list of such as they most desire, and also add a few numbers marked "*2nd list*," to be selected from, in case any of those on the first list happen to run out.

N. B.—In making out a seed list, use only the *numbers* (p 90), and omit the name of the seed.

N. B.—Remember to provide for the postage when the seeds are to go by mail.

A New Feature in the Seed Trade.

The difficulty of procuring good seeds in remote sections of the country, is in a fair way to be obviated, by the plan now adopted by dealers, of offering select lists of seeds to be sent by mail. Our readers will find, in our advertising columns, several announcements of this kind by reliable seed dealers. This rather interferes with the extensive system of seed distribution and premiums, adopted by us, several years since, but we are not sorry. Nothing pleases us more than to see a wide diffusion of plants and flowers. But aside from the pleasure, what we lose by competition, we shall gain in the end, by the increased attention and taste developed for plants, and a consequent larger demand for agricultural reading. We also heartily welcome our dignified cotemporaries, who, with but one or two exceptions, have even at a late day commenced scattering seeds and plants broadcast among their subscribers. Now that they join us in the good work, we cheerfully overlook the hints of "catch-penny," etc thrown out in certain quarters, when our first active efforts towards a wide distribution of seeds were made. "All's well, that ends well."

To the Mountains of California.

The Steamer that carries this number to the Pacific Coast, takes out a Wheeler & Wilson Sewing Machine for Scott Valley, Siskiyou County, California, which lies about 300 miles north of San Francisco, near the boundary of Oregon. This machine is sent by the Publisher of the *Agriculturist* as a *premium* to a Lady, who, by showing a single copy of the paper, has, since Dec. 1, obtained the requisite number of names, and had, at the date of her letter (Jan. 10,) started a second list for the Cyclopædia premium, which she soon expected to secure. She says, the premiums are less a stimulus, than a desire to show that this region is not, as some think, "inhabited by savages and wild beasts, dwelling in holes in the mountains," which the map makers have sprinkled so profusely over that part of the country. It will certainly startle many Eastern people to learn that in a single locality in those far off regions there are hundreds of enterprising farmers who subscribe for and read the *Agriculturist.* So far we believe Siskiyou County is *our* banner county on the Pacific Coast.

Can at any time be increased, by remitting for each addition, the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will of course be sent to added names.

American Agriculturist.

(ISSUED IN BOTH ENGLISH AND GERMAN.)

A THOROUGH GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; IN-DOOR and OUT DOOR work around the DWELLING; care of DOMESTIC ANIMALS &c &c.

☞ The matter of each number will be prepared mainly with reference to the month of issue and the paper will be promptly and regularly mailed at least one day before the beginning of the month.

A full CALENDAR OF OPERATIONS for the season is given every month.

FOUR to FIVE hundred or more, Illustrative ENGRAVINGS will appear in each volume.

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All business and other communications should be addressed to the Editor and Proprietor,

ORANGE JUDD,
No 189 Water st, New-York

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ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN.—WASHINGTON.

ORANGE JUDD, A. M.,
EDITOR AND PROPRIETOR.

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VOL. XIX.—No. 4.

NEW-YORK, APRIL, 1860.

[NEW SERIES—No. 159.

☞**Office at 189 Water-st.,** (Near Fulton-st.)
☞**Contents, Terms, &c., on pages 123-8.**

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The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of Uniform size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs.

April.

Does, then, the green earth teem with gladness?
Has Nature dropt her robe of sadness?
Do the swains pipe; the flocks rejoice;
The mountains echo Bacchus' voice;
The mariners their sails unloose;
The bees distil their luscious juice?
Has Spring inspired the warbling throng?
— And can't the poet make a song?

MELEAGER'S "SPRING."

The poet hardly needs an apology for his song at this gladsome season of the year. For it is a bright and cheerful time, whether it come with elastic footstep, as on the plains of Syria where Meleager sung, or with lingering tread, as on the Atlantic slope of our continent. It is none the less glad, because the sunny days come tardily, alternating with days of storm, when the chill East wind with breath of needle points, fills the air. There is a perfume of roses about these first warm days in the unconfirmed Spring, all the more enjoyable because of the sharp contrasts that precede and follow them. Flowers were not half so sweet, if they were not frail and perishing. April is the weeping sister in the fair company of the months, because her showers are so numerous and fitful. We enjoy the gleams of sunlight between, all the more for the setting of storm and cloud that encircles them. The pleasant days of April come to us, with all the freshness of novelty. The biting cold of Winter, its snow clad hills and ice bound streams, its sleeted forests and frozen earth, are yet fresh in memory. We feel that we hold the golden hours by the slightest tenure. All signs of fair weather fail. The ruddy sunsets do not bring dry weather on the morrow, and wind from the north is not the harbinger of clear skies. Here comes a squall out of the northwest, black, windy clouds pouring down snow and hail with a violence worthy of December. But it is soon over, and the springing blades of grass look all the greener amid the dissolving snow.

With all these drawbacks, Nature gives unmistakable evidence that "the Winter is over and gone, and that the time of the singing of birds has come." The feathered songsters are already heard in the edge of the forest and in the orchard. The soft notes of the blue-bird have filled the morning air with melody for many weeks, and he is already looking up his Summer quarters. He has found his mate, and we understand the sprightly conversation now going on around that knot hole in the old apple tree. The woodpeckers occupied the tenement, and raised their brood there last year, but the blue-birds have the start of them now, and already the nest is lined, and will soon be filled with tiny eggs. The robins are seen in every hedge and sheltered spot, and the blackbirds have made their appearance in the edges of the swamp. They follow the plow-boy as he turns the furrow, and in company with the redbreast, devour every grub and worm that comes to the surface.

The wild geese, in long wedge-shaped flocks, are wending their way from the swamps of Florida and the Carolinas, to the coasts of Labrador and the far North, to lay their eggs and rear their broods. The ducks that thronged the bays and rivers in the Winter, have long since disappeared. The domesticated fowls also give unmistakable signs of a change of season. The poultry yard is more noisy than ever. What struttings and crowings of the cocks, what cacklings of the hens, making a sensation over new laid eggs! The geese and ducks are already busy with the labors of incubation, and will soon have their young flocks abroad upon the pond or brook.

It is yeaning time in the farm yard. Calves with sleek sides, and mouths frothy with fresh drawn milk, are seen at morning and evening running at full speed, pursued by anxious mothers. Here also are the little white lambs lying beside the fleecy ewes, pictures of innocence and comfort. There would be poetry in the scene, if we did not see the drover, or the butcher looking through the gate, and putting a price upon the heads of these innocents, tempting the farmer to sacrifice these gambols for sordid love of gold. The boys hate the sight of his red wagon, and his big whip. They have seen many a favorite calf with his bright eyes and beautiful white spots disappear in that same red wagon, and have shed tears over his untimely fate. When they get big, the butcher will do well to keep away from that farm-yard!

Now too the cheerful labors of the garden begin. Woman is out, trowel in hand, giving her personal attention to the early floral visitors. The flower border is uncovered, and the crocuses and jonquils, violets and snow drops, are seen peeping from the earth. The climbing roses are trimmed and fastened anew to the trellis. The Wistarias, honeysuckles, and other creepers are put in order. The whole border is dug over and prepared for seed-sowing. A charming sight is woman in the garden, evoking flowers from the genial soil, herself the fairest of them all. There is said to be nothing so good for dyspepsia, as the smell of fresh earth. Provided the invalid does the stirring, we have faith in the remedy. It is also an excellent remedy for pale cheeks and weak joints. There is health in the morning air, and in the companionship of dew drops. There is often a medicinal virtue in them, that the drops administered by the faculty do not possess. Beginning with the early Spring, and gradually increasing the labor, it is quite possible for daughters delicately reared, to strengthen their bodies, and fit themselves for the responsibilities of housekeeping. There is a much older and more brilliant language than French, they need to learn. The lessons are taken at sunrise, and the dictionary is a flower border well stocked with seeds and plants. Now that the season is changed, let the fair pupils exchange skates for the trowel and garden rake, and see if something noteworthy can not be learned in the most primitive of human arts.

As for the piping mentioned by our poet, the world has undergone an entire change since his day. The swains pipe as much as ever, but the instrument is no longer a reed, and the product, music, but a small bowl of clay, with short stem, stuffed with a dry herb, and the product, a stench that would have smoked Hecate and the Furies out of their homes. There is no accounting for tastes, but we think the piping of the swains of the olden time was the more sensible of the two.

The world has undergone important changes in other respects. Commerce no longer goes creeping along the shores of inland seas, confining itself to Summer voyages, and hauling its boats on shore when the Winter storms come on. It pushes its adventurous way out into the trackless ocean, on voyages of years in length, vexes the waters of all seas, and never furls its sails but in climes where the ice rears its impassable barriers. Agriculture is no longer the puny handmaid of the living ship of the desert, and the boat trade of the Mediterranean, but the mighty feeder of modern commerce, freighting ships to all lands, and making the silks and teas of China, the coffee and spices of the Indies, the sugars and fruits of the tropics, and the furs and oils of the frozen zones, the common articles of convenience and luxury in every prosperous farmer's home. If the old Greek felt like singing with the incoming Spring, how much more should we be thankful not only for the changing seasons, but in the greater change of the farmer's lot from his time to our own!

* * *

To sit down at the beginning of the month and make a list of the various things to be attended to, greatly facilitates work. The most successful farmer we know, keeps a slip of paper constantly with him, and whenever anything occurs to his mind that he desires to remember, he at once notes it down on his memorandum. It is unnecessary to say that on his farm every thing moves forward smoothly, pleasantly, and profitably also.

Calendar of Operations for April, 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45° ; but will he equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

Explanations.—*f* indicates the *first* ; *m* the *middle* ; and *l* the *last* of the month.—Doubling the letters thus:*ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated ; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

N. B.—In cold northern climates, where winter still hangs on, some of the hints below, especially those referring to putting out plants, etc., will necessarily be delayed to May. Nothing is gained by working land that is still cold and saturated with water.

Farm.

During this month, active operations fairly commence. Fencing, draining, manuring, plowing and sowing, and other work require immediate attention. Every day lost now, will count two before the Summer is over, in extra work to be done hurriedly and out of season, and may be severely felt in lighter returns at harvest.

In soil culture especially, a liberal policy pays best. It has been proved a thousand times that fifty acres properly drained and plowed, abundantly manured, not stinted in seeding, and thoroughly worked throughout the season, will fill a larger purse at the year's end, than twice that amount carelessly prepared, sparingly enriched, stingily seeded, and half tilled, from mistaken economy in employment of help and other indispensable outlay. Let the rule be, *Do well, what is to be done*, and "well done" will ultimately be written all over the fields, in the golden letters of a full harvest, and in lines of satisfaction on the face of the successful cultivator.

Bees should receive attention to prepare them for their Summer's work, so freely and cheerfully performed. Very full directions on the Spring treatment of bees were given in the "Apiary" last month ; and under the same head in this paper.

Buildings—Clear out all accumulations of rubbish from barns and sheds. Allow no fermenting manures to rot the sills or boarding. Keep in order, and paint where needed. Cleanse and paint, or whitewash wood-houses, poultry houses, and other out-buildings where vermin breed readily. A *scratch* in time saves nine. A good whitewash for out-doors is made by adding 5 to 7 ounces of tallow or other grease to each peck of lime dissolved, putting the grease upon the slaking lime, and stirring it in thoroughly while the lime is still hot or warm.

Cabbages—Set ff, m, in well manured and finely pulverized soil, 2½ feet apart. Watch carefully for and destroy the cut worm, resetting any plants eaten off.

Calves—Carefully select from the best for raising, although the butcher may offer tempting prices. Teach them to drink from the start. Feed them with plenty of *new* milk for the first few weeks, after which mix in skim-milk and a little oatmeal or shorts, increasing the quantity daily, until they will readily eat only meal and water. To cure scours, mix wheat flour with the feed.

Carrots are of high value for feeding cattle and horses, and yield largely. Plow or dig deep, manure heavily, reduce the soil to a fine tilth and sow, ll, in drills sixteen inches apart. Put in seed as soon as ground is prepared, before it becomes lumpy.

Cattle in this latitude will require feeding at the barn most of this month. Too early turning out, is injurious to the pastures ; and the animals themselves are checked in their growth, as the young grass though insufficient for their wants, spoils their appetite for hay. Keep them from the mowing grounds ; all the growth *there*, is needed for the hay crops. Breeding animals need especial care. As their time approaches, they should be separated from the rest of the herd. Give working oxen a daily feed of potatoes or other roots together with grain ; card and brush them frequently.

Cellars—Cleanse thoroughly from decayed vegetables and litter ; whitewash the walls ; remove boxes, barrels, loose boards, etc., not in use. Lime sprinkled where vegetables have decayed, will destroy impurities that might taint the air and injure the flavor of milk and butter if kept in the cellar. Give free ventilation.

Clover may still be sown on winter grain, ff. Use not less than six quarts per acre, and in many instances a peck would be profitable, especially where it is intended to plow in green for manure. Sow upon a light snow, so that the seed may be carried down into the soil. This is the practice of many good farmers. When sown on snow, it is easy to see whether the seed falls evenly. Our own experience is decidedly in favor of sowing clover on wheat or rye towards the end of the freezing season. A still morning is chosen when the ground is frozen an inch or two in depth, leaving it full of interstices or cracks, into which the seed rolls, and is covered on thawing. When sown too early, the young germs may be killed by frost. When used with Spring grain, sow and work in with a light brush harrow after the grain is finished.

Corn—If old roots were not harrowed out last month, attend to them ff. Procure seed and test it, ff, if not already done ; provide an extra supply to replant if the first fails. Manure, and when dry enough plow grounds for planting next month. If in heavy sod, turn it well over, then spread the manure, and before planting, cross-plow very lightly, and harrow well, to mix the top dressing with the soil but not to disturb the sods below. Their fermenting and decay will warm the surface and enrich the deeper layer, and prepare it for the future wants of the roots.

Cranberries—For particular directions see page 115.

Door Yards—Clean up all rubbish, chip-dirt, ash-heaps, and other litter, and remove them to the compost heap. Make convenient raised walks of brick, plank, or coal cinders. Place foot scrapers near the outer gate, to prevent accumulation of dirt around the door step.

Draining—Nothing is more important for half the soils in the country. Crops on well-drained lands are almost independent of rains and drouths. With blind drains deep below the surface, the surplus water of a wet season runs off ; and the roots of plants go so far down into a well-drained soil, that they bring up sap in the dryest season from a point below the sun's parching effects. Deeply drained soils are warmer, and can be worked much earlier in the Spring. Drain all the land you can every year, and especially *this* year. Do it thoroughly, for all time, as far as you go. Put the drains three, or better, four feet below the surface, and near enough together to thoroughly remove water from the space between the drains. Dig trial holes four feet deep, and wherever you find water standing in them three days after a rain, that soil will pay for drainage. Stones or tiles are best in all cases. Where tiles are accessible, the less digging required will usually pay for the extra cost over stones near at hand. Where stones are in excess, the best way to get rid of them is to bury them in the form of drains. A mass of stones thrown into a drain answers a tolerable purpose for a time at least, but it is always better to lay them so that there shall be a continuous passage for water. Leave no stones within 18 inches of the surface to be disturbed by the plow. You will surely have the plow and subsoil plow down to that depth in less than ten years—if you continue to read the *Agriculturist*.... Any form of tile may be used, but the round tubes are cheaper, and are quite as good as the horse-shoe tiles with soles. In laying the tiles be sure to have them on a hard smooth bottom, and the ends exactly meeting. In a loose muck or bog soil, put down thin rough boards or slabs of some durable timber to lay the tiles upon. The boards will last many years, and when they finally rot, the soil around the tiles will have become so compact as to keep them in their places. Run drains down hills, and not around their sides. This subject is fully discussed in Vol. XVI, at pages 54, 97, 101, 125 and 149.

Fences—Have as few as the farm will admit of, and keep them in the best repair. Where stones are plenty, use them for walls. In wet locations, make ditches along the fence lines to prevent heaving by frost. Make gates for all entrances frequently used. Sods from salt marshes may be used to good advantage for fencing. See directions for building on page 110. Plant hedges, f, m, l, of Osage Orange, Buckthorn or Honey Locust. Read article headed "Vicious Cattle" on page 110.

Feet—To avoid colds, chills, and agues, keep the feet dry and warm. Leave the upper leather without oil or grease, except an inch or so above the soles. Grease this part and the soles well. This keeps out moisture from the ground, but allows the prespiration to escape from above. The feet are thus kept dry and warm. Good, thick, large "cow-hides" conduce to health and comfort—let the Chinese, and fashionable people, and fools, wear the small and thin shoes....Changing the socks at noon, and especially when work is over, takes but little time, and conduces greatly to comfort and health.

Grain Fields—Keep all stock from feeding or trampling upon Winter grain. Open drain furrows that have been filled during Winter. Re-sow bare spots with Spring varieties.

Hedge rows and bushy clumps near fences, or scattered about the fields, disfigure the farm, occupy valuable space, and shelter vermin ; root them out, and sow with grass seed if not wanted to plow.

Hired Help—Plenty of good help is cheap at any price—and poor help is dear at any price. You have your men, and women too, to board any way, and to wear out and break things generally. Two or three dollars more per month for good help is well made up. The cheapest farm hand we ever had, we paid $20 a month and board. He was worth two twelve-dollar men in well-directed efficient labor, worth another one in the care he took of implements and animals, and in keeping an eye to things generally ; and it cost no more to board him than one poor laborer.

Horses, if properly cared for, need not be reduced by Spring work. Work them gradually at first, until hardened to it, and give more grain, with carrots to keep up their appetite. Grooming them thoroughly every night, brushing and rubbing down well, will prevent or alleviate soreness of muscles. A loose layer of leather under the collar will prevent galls. Breeding mares require moderate exercise daily, and roomy stalls when near foaling.

Lime is useful on cold sour land, and wherever there is undecaying vegetable matter in the soil. 15 to 40 or 50 bushels to the acre may be used, according to the degree of coldness. On light land, 10 to 20 bushels is an abundance for one application ; too much lime speedily destroys the entire organic matter, making it what is commonly, though not correctly called "lime sick." Sow the freshly slaked lime upon the surface and harrow it in, at almost any time before or after seeding, but not after the seeds begin to sprout.

Lucerne—In dry calcareous (limestone) soils, and on deep sandy loam, this plant may be valuable for soiling. Sow on well prepared ground, m, l.

Manure stored and prepared by composting, is now wanted in the fields. It will be much more beneficial to the growing crops if finely divided and well mixed with the soil. Working the heap over, and adding muck, lime and plaster, will thus improve it. Avoid purchasing fertilizers until every resource for manufacture upon the premises is exhausted. Beware of high sounding names and spreading advertisements.

Meadows—Go over with a "maul" and beat up the scattering lumps of manure dropped by the cattle. Gather all loose stones, and dig out, blast, or sink large ones, working them into fences. Top dress bare spots liberally with yard manure and sow grass seed. It is also well to go over such places with a heavy harrow, scatter seed and roll smooth.

Oats—Sow, m, to l, on ground used for hoed crops last year. Manure is better applied to the previous crop. If used very freely in Spring on good ground, the crop runs to straw, and is likely to lodge.

Onions if properly cared for are very profitable. Make the seed bed deep, rich, mellow, and free from stones, and lumps. Sow, m, l, in drills twelve inches apart, and cover lightly.

Plaster may be tried upon various crops, using from 200 to 500 lbs. to the acre, where it does not cost over $7 to $10 per tun. There is no guide for its use, but a trial, for, while on many soils it is very efficacious, on some others it is of little benefit, and no certain reason can be assigned. Sow it broadcast over wheat fields, especially where clover seed is put on. Sow it also on ground for Spring grains and other crops, and harrow it in before seeding, or with the seed. It so often proves valuable, that it is worth trying where this has not been already done thoroughly. To *test* plaster, pour vinegar, or some stronger acid upon a little of it ; if it ferments greatly, it contains considerable carbonate of lime, and is not pure plaster.

Plowing should not be entrusted to careless hands. Deepen the soil gradually, say an inch at each plowing. Where the center of a field has been hollowed, and the sides thrown into a ridge by plowing around the field year after year, remedy this by back furrowing until it is properly leveled. Read article on page 107.

Potatoes—Early varieties are most valuable where a good market is easily accessible. Plant, m, l, on rich mellow soil. Use those of medium size for seed, planting in rows 3 feet apart, two eyes to a piece, dropped one foot apart in the rows. Try an experimental plot, varying the amount and kind of seed used.

Poultry are now singing their Spring *lays*. Supply them with plenty of lime to work up into egg shells, and with grain and refuse meat to fill the shells with. Set the hens, ff, for early chickens. Supply clean straw and fresh whitewashed boxes for nests for setting hens. Tobacco stalks and leaves mixed with the straw are recommended to expel vermin. Feed the chickens with corn cracked fine and boiled, which is preferable to meal ; increasing the size as they grow older. If vermin infest the hens, grease them slightly under the wings when they leave the nest.

Rye—Sow Spring variety, m, l, using two bushels of seed per acre, on clover sod, or following a hoed crop the previous year, which is preferable if the land is in good condition.

Sheep—Keep separate from cattle. Give warm shelter at night to breeding ewes, now dropping their lambs. If any refuse to own their lambs, shut them by themselves with their young until they yield. Feed puny lambs with fresh cow's milk until they can draw nourishment for themselves. Give plenty of water, and salt once a week.

Sorghum—Prepare ground as for corn, ll.

Swine—Keep watch over breeding sows, that they do not devour their young. A little animal food, and also ashes and charcoal are serviceable to allay their craving appetites. Keep them in warm pens, with not too much litter, that the pigs may not be overlaid and smothered.

Timothy—Sow, ll, with Spring grain, and to re-seed meadows, as directed above.

Tools of every kind should be in readiness, ff. Examine and purchase *good* labor saving implements; on a large farm the expense of two or three hands may often be saved every year by a single machine. Secure such as you know have been tried and proved valuable.

Trees by the road-sides and along lanes, especially fruit trees, are ornamental, and are permanent improvements to a place. Waste rocky spots may be profitably devoted to growing timber, especially yellow locust. Have an abundance for fruit and shelter in the immediate vicinity of the house.

Wheat and Rye fields pay for attention now. Remember that the real winter-killing is done in Spring. The leaves may be destroyed in Winter, and the roots start anew; it is the alternate freezing and thawing of the soil around the roots that destroys them. The more wet the soil, the greater will be the expansions and contractions, and the greater the injury. *Therefore*, clean out all open and blind ditches at once, so that the water will run off. It is often advisable to run the plow through the dead furrows to open them in the latter part of Winter. A heavy single horse must be used for this, to avoid trampling the wheat outside the furrows. On spots where the Winter wheat is surely dead, scatter on Spring wheat; the ground is all prepared for a crop and should not be left idle, or what may be worse, a nest for weeds. The extra seed may be hoed in on small plots, or dragged in on larger ones. It will often suffice to simply sow it on the ground when frozen, as directed for clover.

Orchard and Nursery.

Nobody expects wheat, corn, or potatoes, to produce well, without proper attention from the first planting of the seed to the final harvest; but few comparatively, except practiced nurserymen, perceive the necessity of like care in tree culture. The work is called finished when the roots are put in the ground; no further pains are taken to cultivate, to shelter, to prune, to destroy insects, and very little trouble is experienced in gathering fruit—it does not grow—that part of the work was effectually *finished*, by careless treatment at first, and continued neglect. If an orchard, or even a few shade trees are needed, (they are, on most homesteads,) attend to it early this month. Procure them from *reliable* nurserymen, and if practicable attend personally to the selection and transplanting. Old orchards will in many cases receive a new lease of life, and be encouraged to good works, by liberally manuring with well rotted compost, plowing and cultivating with potatoes or other hoed crops, or better still, by Summer fallowing the ground, leaving all the manure for the trees. See page 116.

The Nurseryman's success depends very largely upon promptness and *accuracy* in filling orders. Many are deterred from planting trees by the disappointments experienced through delays, and mistakes in filling their orders. Ample preparation should be made for the opening trade, by heeling in sufficient quantities of the principal varieties, properly labeled, in a convenient place for packing. Attention to sales, transplanting young stock, grafting, and cultivating among the rows, will fully occupy the time this month.

Apple trees succeed best when planted early, so as to get a good start before the Summer drouths set in. Set these and other fruit trees as soon as the ground is dry enough to work well. Let the ground be deeply and thoroughly plowed for an orchard. Subsoiling will greatly benefit it. Make the soil as rich as for a good yield of corn. Do not be ambitious to secure *large* trees for transplanting. They receive a greater check in moving. If the soil be sufficiently light, it will only be necessary to dig holes a trifle larger than the roots, which should always be spread out in their natural position. Avoid setting in too deep holes, especially if the subsoil is heavy or clayey. (See page 116.) Expose the roots to as little sun and wind as possible while transplanting. Graft, ff, m, any trees needing it. Full directions for performing the operation have previously been given. Sow, m, seeds kept in boxes over Winter.

Budded Trees—Those which were budded last season, but not cut back, should now be cut off to within two inches of the fresh cion or bud.

Cherries—Plant, f, m, any pits kept in boxes of earth. Set and graft as treated under apple trees. As they begin to grow earlier than apple trees, the grafts should be put in, ff, or even the latter part of March.

Dwarf Pear and other Trees—A few selected sorts of pears, known to succeed well upon the quince, may properly be set in their dwarfed state in the kitchen and fruit garden. They have a good effect when planted on the borders or along walks, where they frequently bear good crops. But for the main reliance, standards will give the best results.

Evergreens—These can be transplanted now, but we have had the best success with those planted out just when new branches begin to start out, say about the middle of May, in this latitude. Nursery grown evergreens carefully transplanted at that time, are about as sure to live as deciduous trees.

Flowering Shrubs—These should be transplanted early, especially if to bloom the coming season. See under Flower Garden.

Grafting—The proper season for grafting is now at hand. How many thrifty growing and full bearing trees now produce only very common fruit, which can be made to yield equally good crops of the better sorts, in a brief space of time, with very little expense or labor. Begin with the bearing tree, by grafting about one third of the most upright branches this Spring; then graft another third next Spring. The third year will complete the change, at which time the first grafts will already be in bearing. Cherry cions should be put in first, say from the first to middle of this month, while apples and pears may be grafted during the entire month. If any cions are to be cut, take them off at once. Remove one of the two cions put in a single branch last season, if both are likely to grow large.

Grape Vines—Put in cuttings and plant roots, ff, m. Avoid pruning or marring the vines at this season as they "bleed" badly. Bend down and cover branches with earth when you desire to form rooted layers for planting. See articles upon layering, on page 184, Vol. XVI, and upon pot culture of grapes on page 52, (Feb. No.), of this volume.

Head back the pear and apple trees which are growing too uprightly. This will induce side shoots and make stocky and much more valuable trees. One of them will be worth more than a half dozen "whip stocks" which require stakes to hold them up. An upright branch may sometimes be bent and tied down with advantage, as shown on page 53 (Feb. No.).

Hedge Plants—Sow, ff, m, the Osage Orange, honey locust, and other hedge plant seeds kept in boxes during the Winter. Set in convenient working rows, and cut back those plants one year old, unless they are sold or permanently planted out at this age. This cutting back is of great importance to form a thick bushy plant branching down to the very ground.

Inarching, or Grafting by Approach—This may be done at any time during the month. See illustration and description of this process, on page 184, of Vol. XVI. Provide for future inarching by planting stocks around the tree or shrub to be propagated from in this way. The process is an interesting as well as useful one.

Insects—Eggs of the caterpillar are frequently seen at this season in a compact cluster, firmly glued to the twigs of apple trees. Cut or rub them off and burn them. Destroy any cocoons in the forks or under the loose bark of trees. Search out and kill any borers allowed to spend the Winter in apple or peach trees. A preventive will be given in June, at which time it is to be applied. Wash off scale, or bark louse, with a strong soap suds, or better still a solution of one pound of potash to six quarts of water. The eggs are now under the old scales and will be crushed, or so exposed as not to hatch, if their natural covering be removed by washing or scraping.

Laurel (Kalmia *latifolia*)—Sow seeds, f, m, in a finely pulverized, loamy soil, to which a large amount of muck has been added. In the absence of muck, cover the seed with three fourths inch fine mold (black earth) scraped from the woods. A spot partially shaded is desirable, as the young plants will not bear a hot sun constantly shining upon them. Where the trees are found in the forest, transplant, f, m, retaining earth about the roots where practicable.

Manure should be used liberally, as well upon the ground now being planted in an orchard, as about the roots of bearing trees, in the nursery rows and on land for the first time taken for nursery purposes. Manure pays as well in tree growing and fruit bearing as elsewhere. Lime, ashes, and decomposed muck are good fertilizers both in orchard and nursery.

Nuts, acorns, peach or cherry pits, and other hard shelled fruit or forest tree seeds, will soon be sprouting. If in boxes of earth, plant in prepared drills, ff, m.

Orchards—Plant a new one, ff, m, selecting kinds of fruit. But while the new one is growing, do not neglect the old. Cut away dead branches, manure the ground and plow it lightly, harrowing it once a week during the Summer. A bushel of leached ashes, or a peck of unleached, or of shell lime scattered under each full grown tree will often renew both its growth and fruitfulness.

Pack in a thorough manner any trees that are to be sent to a distance. See illustration of a packed bundle, with directions for the operation on page 117, Vol. XVII.

Peach Trees—Plant out, ff, m, selecting trees but one year from the bud. They may be set between the newly planted apple or pear trees. Being of quick growth, and short lived, the peach trees will arrive at maturity and gradually decay before the slower growing apple needs the space. Cut back the leading shoots of bearing trees, taking off one third of the *last year's* growth.

Planting out and transplanting generally both of fruit and shade trees, excepting evergreens, should be done in *early* Spring. Make preparations for, and begin the work as soon as the ground is dry enough to dig.

Plow out the nursery rows, ff, m, turning the furrows from the trees this time, if the last plowing was towards the trees. All grounds to be planted to an orchard or nursery, should also be thoroughly and deeply plowed, and also subsoiled. It is well to keep the newly planted orchard under the plow for a few years after planting at least.

Plum Trees—Set out, ff, m, if possible, so as to make a poultry yard of the plum orchard. Fowls are great destroyers of curculio and other insects. Cut out any black warts found upon the branches. Plant seeds, ff.

Pruning—Spring is not the best time to remove large branches. The ascending sap escapes at the wound, and, running down, discolors and poisons the bark. Nor does the new growth close over it readily. Where it is really necessary to remove such branches, coat the wound with grafting wax, or better still, gum shellac dissolved in alcohol to the consistence of cream. We prefer leaving large branches until there is no more free sap, and when the new wood has already begun to form. The wound will then heal quickly and firmly, leaving sound, healthy wood beneath. Better prune at this season only with the pruning knife, for removing straggling twigs and suckers.

Pear Trees—Plant, ff, m, as directed under apple trees. As pears are an ever welcome fruit, see if a few more trees cannot advantageously be set about the buildings, along the lanes, or in the orchard. There is frequently a little space near a barn, shed, or hovel, where some shade tree will be a benefit, at least to the looks—this may appropriately be a *fruit* tree combining profit with beauty.

Quinces—Plant ff, m, along border fences, or in orchards. Select the orange variety as a well approved sort.

Seeds of any kind, whether saved dry or put in boxes of earth, should be planted ff. Handle them carefully, as some may be sprouted.

Stools, that is those shrubs kept for propagating, should now be dug about, and the last season's growth layered. Remove the layers of last year if well rooted.

Stocks, or seedling cherry, pear, apple, etc., trees, should be planted, ff, m, so as to get an early start. They will thus be in a better condition to bud next summer.

Spade early among trees too thickly planted to admit the plow. A *fork* spade is better than the shovel form.

Trench ground for planting a nursery upon, if it can be done. It can not be done when covered with trees.

Kitchen and Fruit Garden.

"A fat kitchen maketh a lean Will," said Poor Richard's Almanac; but however true that might be in his day, modern improvements in gardening and fruit culture both in the articles produced, and the manner of raising them, now make it possible to live both luxuriously and cheaply. With Asparagus and Rhubarb, peas and strawberries, egg plants and blackberries, tomatoes and melons, and the profusion of vegetables and fruit now obtainable, the humblest laborer may rejoice in many a dish "fit for a king"—which is as it should be, since all are sovereigns in America. Unfortunately too many consider the garden a mere secondary appendage to the premises, treat it indifferently, and are repaid with equal indifference by the garden plot. Nature is bounteous but she resents a slight. Let the cultivator in planning his operations count the garden work among the first in importance, begin the season with due attention, and follow it up faithfully, and it will gladden his table, cheer his wife, increase home comforts, and not impoverish his purse.

Make the soil deep, mellow and rich, by draining, manuring and forking over. Sow seeds as soon as the ground is warmed, and danger from frost is over. For early vegetables use the hot-bed. In its absence, tender plants may be protected and forwarded by a pane of glass laid upon four bricks placed together around the hill, which should be taken off daily when not too cold to give air.

Apricot trees succeed best near a wall or fence, with a western exposure. A few may be planted in large gardens partly devoted to fruit.

Anise is often oseful medicinally, sow, m, l, in light dry soil.

Artichokes—Remove covering, and divide and reset roots, m, l, in hills three feet apart each way, in richly manured soil. Sow seed, f, m, two inches deep, in drills eighteen inches apart.

Asparagus—Sow seed, ff, in drills an inch deep, twelve inches apart. For family use, it is easier to raise from roots grown from seed by the nurserymen or seedsmen. Trench the ground deeply, and make it very rich with horse manure. Set the plants with the crown two inches below the surface, in rows one foot apart. A bed six feet wide by twenty long, will supply a family of the average number. See full chapter on page 50, February number.

Basil—Used for seasoning soups and sauces—sow, l, on the edge of beds; thin to six inches apart.

Bean poles and brush for peas. Procure a full supply and sharpen ready for use.

Beets—The Long Blood and Tornip Rooted varieties are generally preferred. For the first or early crop, sow as soon as frost is out of the ground, on deep, rich soil, in drills half an inch deep, eighteen inches apart. For use in Winter, sow late in May.

Blackberries—The New-Rochelle heads the list of cultivated varieties. Set out, ff, m, on light soil enriched with leaf mold, chip dirt, and a little yard manure, in rows eight feet apart, and six feet distant in the row. Head back straggling branches on old canes, if not done last Fall, cut down to six feet high and secure them to stakes or wires ronning lengthwise the rows. This is preferable, as giving more exposure to light and air. If plants are not accessible, sow seed, f, m, in drills 15 inches apart, and cover lightly. These well cultivated this season, will give plants for next Spring.

Borecole and Broccoli—Sow, ll, in rich soil, broadcast on the surface, and rake in lightly. Water occasionally if dry. They will be ready to transplant like cabbages in June or July.

Cabbage—Early York for Summer use, and Drumhead for Fall and Winter, are favorite sorts. Transplant from hot-beds to rich ground, m, l, if the weather is warm and settled. Sow seed, l, in open, mellow ground for late crop, and rake in lightly.

Carrots—See directions under this head in Calendar of the Farm.

Cauliflower—Sow and cultivate the same as cabbage.

Celery—Sow, l, on dry, rich soil, on a warm border, half an inch deep in drills one foot apart.

Chives are prized by many for an early salad and for flavoring soups Set bulbs, m, l, on edges of beds, six inches apart, two inches deep.

Cold Frames—Give plenty of air, and remove hardy plants to open groonds, m, l. Put in seeds for future transplantings.

Cucumbers—Plant seeds in small sqoares of turf, ff. Keep them in the hot-bed, or in a pan in the house until May, when they can be transplanted without distorbing the roots. Plant in open ground, ll, if sufficiently warm, in hills of rich sandy soil raised six inches above the surface, and six feet apart each way. Put in plenty of seeds, planting in each hill several times at intervals of a few days. The bugs will attack the tender and younger plants, and leave the more vigorous unmolested. They can be thinned after the insects have finished taking toll.

Currants—Plant cuttings and rooted bushes of the Red and White Dutch, Cherry, Versailles, White Grape or other improved varieties, f, m. Cut oot the eyes from the part of the slip to go below the surface, set it six inches deep, leaving four or five inches above the surface. Set the rows on the borders of paths, or where they can be hoed around.

Drain as directed under Farm.

Egg Plants—Sow seed, ll. In this latitude it is better to start these in the hot-bed in March, and transplant in May.

Fences—Repair and paint as needed. Keep poultry from flying over, as directed last month.

Figs—Remove covering, f, m. Plant layers prepared the previous year, m, l. Put in cuttings, f, m.

Fruit Trees—It is better to devote a separate enclosure to these. Where this is impracticable, a few may be planted around the border of the garden, and dwarfed varieties introduced along the main walks. Set them oot as soon as the ground can be worked.

Garlic—Plant, m, l, two inches deep, in drills one foot apart, thinning out to foor inches.

Grapes—A neat arbor covered with vines, is a great addition to the garden, and if well cared for, will please every taste. Plant vines and cuttings, f, m, as described on page 113. Of the new varieties, the Delaware, Diana, Concord and Hartford Prolific are favorites. Remove covering from those protected during Winter, and confine to arbors, stakes, trellises, etc. It is now too late for Spring pruning.

Herbs—Set out or sow seeds of hyssop, thyme, roe, sage, savory, etc., on borders of beds, f, m.

Hops—A few vines trained along the fence, or on poles in vacant corners, will give a sopply for family use. Enrich the groond well, and plant roots, f, m.

Hot-Beds—Raise the sashes every day to harden the plants, and give plenty of water. New beds can still be made and sown, ff. Many in this latitude prefer to do this in the beginning of April. Full directions for making are given in Vol. XVIII, page 83 (March No.). Read also article "Even a Boy can make a Hot-Bed," on page 114 this No.

Horse Radish cultivated with a little care, produces superior roots. Trench deeply as for other roots, set the crowns two inches below the surface, in rows one foot apart and nine inches distant in the row. If pieces of roots are used, bury them fifteen inches deep.

Kohl Rabi is becoming a favorite dish. It combines the properties of the cabbage and the turnip, and by many is preferred to either, often succeeding where the turnip will not. Sow, m, l, in shallow drills, nine inches apart, for future transplanting.

Leeks—Sow, f, m, l, in very rich soil, in drills half an inch deep, and six inches apart. Thin them to an inch apart, for transplanting next month.

Lettuce—Sow as soon as the ground can be worked, in deep, rich, sandy loam. Make the drills nine inches apart, and cover very slightly. A few rows for first use may be put between rows of beets, onions, etc. Plant out from hot-beds, ll.

Manure for the garden should be well rotted and folly mixed with the soil. A compost of poultry droppings and chip dirt makes a powerful fertilizer. We like bone sawings, which can be sown broadcast or drilled in directly with the seed. It has given us good returns from oor grounds for years. Use all manures with a liberal hand.

Melons—Follow directions given for Cucumbers above.

Mushroom Beds—Make, f, m, l. Full directions are given on page 262, of Vol XVI (Nov. No.). They are too lengthy for repetition here.

Mustard—Sow at any time after the ground is open and at intervals for a succession.

Nasturtiums—Sow, m, l, in drills an inch deep beside a fence or trellis work. They will run from ten to fifteen feet, and are very ornamental, besides furnishing an excellent pickle.

Okra from which gumbo soup is made, is becoming quite popular. Sow, ll, in shallow drills two feet apart, and protect from frost.

Onions—Follow directions given under Farm.

Parsley—Coltivate the corled variety. Sow, f, m, l, in drills half an inch deep, on the border of vegetable beds, for which it makes a neat edging.

Parsneps delight to go downward in rich, deep, mellow soil; the beds should be worked at least twenty inches below the surface. Sow, f, m, l, one half inch deep, in drills fourteen inches apart.

Peas—Sow the Daniel O'Rourke for very early. The Prince Albert follows in time of maturing, and the Champion of England and Napoleon ripen later. The Champion is the best for a general crop. Sow, f, m, l, or at different periods to secore succession. The late sown are less infested by the pea weevil. Full directions are given on page 117.

Pepper—The Bell or Sweet is preferable for pickles. Sow, f, m, half an inch deep in the hot-bed, or in a box in the house, to transplant in May.

Potatoes—To secure early, follow directions given on page 73 (March No.).

Pumpkins should not be grown in the same enclosure with squashes, melons, and other species of this family. Give them a clear space in the corn or potato field, or scatter seeds among the hills when planting.

Radishes—Sow in light sandy soil, ff, m, l, at intervals of a week, to have them in succession. Room will be saved by putting them in the rows of beets and in the spaces around vines—they will be out of the way before injuring other plants.

Raspberries—The Fastolf, Hudson River Antwerp, Brinkle's Orange, or other choice cultivated sorts are worthy a place in every garden. Even the common Black-cap is greatly improved by care, and much easier to gather than when growing wild in the fields. Set out new roots in rows foor feet apart one way, and three the other. Uncover buried canes, f, m. Fork in top dressing of stable manure. Cut back straggling growth, and tie to stakes or trellises as directed for blackberries.

Rhubarb—This vegetable has rapidly grown into favor during ten years past, and improved varieties have supplanted the small, tough, and acid sorts. For saoce or for tarts and pies it is highly prized, while some persons make quite an account of it for manufacturing into wine. It is one of the earliest Spring products of the garden. Uncover protected roots, ff, and fork in manure plentifolly around them. Divide and re-set large roots for new plants, ff. Cultivate the Linnæos variety. A dozen good plants will sopply a good sized family.

Salsafy or Vegetable Oyster—Sow, m, l, in drills half an inch deep, ten inches apart, and cultivate the same as directed for carrots. Dig and use the roots left in the ground over winter, leaving some of the best for seed.

Sea Kale is much prized by many to be eaten like asparagus in the Spring. Sow seed, f, m, thinly in drills an inch deep, and a foot apart, to secure crowns for transplanting next Spring Set roots two inches below the surface, two feet apart, in well manured sandy soil, well dressed with salt, worked eighteen inches deep.

Seeds—Procure an abundant supply and test them before sowing. Place a few on cotton in a glass of water, and set them in a warm place. If good, they will sprout in a few days. To secore ready growth, some gardeners enclose parcels of seeds in bits of cloth with a paper containing the name, and bury them two inches below the surface, a week or more before wanted for sowing. They will swell and perhaps sprout, and thus be ready to start at once. In covering seeds sown in drills, do not rake them in. It rattles the lumps into the opening, giving insufficient covering. It is better to pass the *back* of the rake along the drill, and best of all, to sift in fine earth by hand.

Spinach—Uncover that protected in Winter, ff, and market or use as wanted Sow for soccessive crops, f, m, l, in drills, a quarter of an inch deep, thinning to nine inches apart.

Squashes—The Hubbard and Boston Marrow head the list of tried varieties for excellence for Fall and Winter use. Plant l, in raised hills eight feet apart, at a distance from melons or cucumbers, and cultivate in the same manner. Plant summer or bush varieties at the same time in hills four feet apart.

Strawberries—A full article may be foond on page 117, which read, and make beds, ff, m, which is the best time to set new plots. Select vigorous plants from last year's runners. Thin old beds by polling out plants marked last season as barren.

Tomatoes—Plants taken from the hot-bed, ll, and properly manured, will bring fruit much earlier. They may be easily grown in a pot in the house. Sow seed in open ground, f, m. in a sheltered warm corner, and protect from cold with a little straw. Plants will be ready for setting out in May.

Sweet Potatoes—For complete directions see page 111.

Tools—Work in the garden is very much expedited by the use of proper tools. Examine catalogues and procure improved. Those essential to a garden are a spade (the *fork* spade is best)—hoes of different sizes, shovel, rake, reel and line, transplanting trowel, and watering pot. A blade spade and an iron bar will also be convenient. After using an implement, free it from dirt, wipe it dry, and put it in its place.

Trench as much of the ground as practicable before planting. The manner of doing this is described in the article on raising Strawberries on page 117.

Turnips—Sow early varieties, m, l, for Summer use, one fourth of an inch deep, in drills ten inches apart. For the main crop, June and July are appropriate months.

Winter Cherry—This has become a great favorite for preserves, pickles and pies. Sow the seeds in a hot-bed, ff, or in a box in the house, for transplanting next month. They will succeed well put in the open ground, m, l. Sow in drills one fourth inch deep, eight inches apart, and transplant when three inches high, to hills two and a half feet distant each way.

Flower Garden and Lawn.

While the Farm and the Vegetable garden must receive attention to supply the wants of the table; these can not afford all that is needed for enjoyment. The rural resident should, for his own and his family's sake, make his dwelling attractive. Costly architectural ornament is not necessary for this. The beauty of Nature is far beyond that of art. With but little expense, and the aid of wife and daughters, the humblest cottage grounds may rejoice in a wealth of vines, and bloom with flowers that shall be the envy of more wealthy but less tasteful neighbors. The smiles of Spring may be perpetuated in leaf, and tendril, and flower, making the heart glad, and ministering continually to the gentler and better feelings, and at the same time bringing roses of health to the cheeks now pale with the confinement and monotony of housework. Make a flower garden this year if never before.

Making or renewing gravel walks, setting out deciduous trees, seeding lawns, preparing borders, transplanting flower roots, and sowing annuals, will give ample employment in this department.

Annuals—The hardier sorts may be sown, m, ll. Among the more common but attractive sorts are asters, balsams, candytuft, coreopsis, clarkia, coxcomb, escholtzia, hibiscus, larkspur, lavatera, marygold, mignonette, nasturtium, phlox, portulacca, scabious, etc. Many of these are on our list for free distribution, see page 122. They are described on pages 3, 4, (January No.). Sow them in patches or singly, according to their habit of growth. With most of them it is important to cover the seed very lightly. In all cases the soil should be finely pulverized, and worked to a good depth.

Biennials and Perennials—With good care many of these increase rapidly, sending up additional stalks from the new roots. The supply may be increased by dividing and transplanting the roots. If more are not wanted, take out the surplus growth to keep them in proper limits. Sow seed, m, ll. Among these may be named carnations, pinks, daisies, chrysanthemums, lillies, sweet williams, yuccas, peonies, columbines, hollyhocks, dielytras, etc.

Borders—Trench deeply and make quite rich. Lay them off three to four feet wide for convenience of working. Prepare for sowing seeds, ff, m, by spading and raking until the soil is mellow and free from small stones and lumps.

Box for edging or borders may be set out, m, l. Set thinly, and in straight rows by a line, or in regular curves to conform to the shape of the flower bed or border.

Bulbs—Hyacinths, tulips, crown imperials, etc., should be in bloom, m, ll. Support the heads by tying to small sticks, and water if the ground be dry, but do not wet the blooms. The flowers will remain longer if shaded from the sun.

Carnations—Transplant to open ground, ll, those kept in pits during Winter. Shift those needing it to larger pots where kept for house plants. Keep well watered and the soil loose around them. Separate the layers if not taken off last season.

Dahlias and Gladiolus—Early blooming is secured by planting the tubers in boxes, m, ll. These are set in the open air in mild weather, and kept housed when cold. When well started, and the weather is warm and settled, they are transplanted to the border.

Dicentra (Dielytra), is one of the most beautiful flowers in the border, Plant out and divide roots, m, l.

Draining is beneficial here as elsewhere. Especially should drains be laid under walks where the ground is at all wet.

Edgings around the borders may be of grass or Box. The latter is preferable if it can be procured. It should be kept trimmed down to not more than eight or nine inches, though by main walks which are long, a higher growth is allowable. Fill vacant spots, f, m. If grass be used, trim the edges evenly, and keep from encroaching on the border. A steel-edging knife is the best implement to trim the turf with.

Evergreens succeed best transplanted in May. They can, however, be moved now, if specially desired.

Frames and Pits—Ventilate freely to harden off the plants and prepare them for planting out. Transplant from them, m, ll, if the weather has become mild and settled.

Flowering Shrubs—Plant, ff, m, the althea, flowering almond, azalea, chionanthus, flowering currant, deutzia, euonymous, holly, Japan quince, laburnum, lilac, philadelphus, rose acacia, snowberry, snowball, spiræa, tree pæony, weigelia, etc. The early flowering shrubs will give a finer bloom by being transplanted as soon as the ground is in working order.

Gravel Walks—Rake off the gravel, hoe out grass, sow liberally with salt to prevent future growth, and replace the covering smoothly and evenly, adding more where needful. Make new walks, f, m.

Hedges—Set out privet, althea, buckthorn, etc., for hedges, f, m. Those to be planted with Arbor Vitæ, hemlock or other evergreens, are better left until next month. Osage Orange and honey locust are of too rampant and coarse a growth to form a handsome screen or protection around the pleasure grounds.

Honeysuckles, Wistarias, and other climbers—Tie up and arrange upon trellises, m, ll, any plants laid down during the Winter. Divide and reset roots, ff, m.

Labels should be affixed to all flowers planted, with the names plainly marked. Become familiar with the botanical names of the various kinds grown; it will be a good introduction to further study. Prepare an ample supply both of labels and stakes, during dull or rainy days. Large numbers will be wanted soon.

Lawn—Its beauty depends mainly on a thick, smooth, velvety surface, free from all unsightly objects as twigs, dead leaves, etc. Sow seeds of mixed grasses for new lawns, or on bare spots of old; top dress with guano, bone dust, ashes, or other finely divided fertilizer, and roll smooth. Liquid manure may be given by attaching a sprinkler to a hogshead set upon a cart or wagon.

Prune, ff, vines or shrubs not yet attended to.

Petunias and Verbenas—Sow seeds of mixed varieties, m, l. Procure rooted plants from florists and set, ll. They make a fine show when set in masses.

Roses—The almost endless variety of monthly, remontant (twice blooming,) and common sorts, enables the cultivator to secure a rich profusion of bloom from these universally popular plants. They can be procured in any quantity from nurserymen, whose catalogues enumerate hundreds of sorts. The Remontant, sometimes called Hybrid Perpetual, will give the best satisfaction for hardy free blooming and handsome sorts. Plant out, ff, m. Prune and tie in place those trained to trellises or pillars. Uncover tender varieties buried or tied up last Fall.

Shade Trees—Replace those that are not thriving with vigorous young trees, if they can not be brought to good growth by proper cultivation. Plant deciduous kinds, ff, m, observing directions given on page 103, in this paper. Prune off straggling twigs and suckers.

Tender shrubs and vines which were strawed up, or otherwise protected last Fall, may be uncovered, f, m, according as the season is early or backward. If the plants are quite tender and covered with a thick coating, remove a portion at a time.

Vines and Climbers—Plant, ff, m, bignonia, clematis, honeysuckles, ivy, trumpet flower, virginian creeper, wistaria, moneywort, etc.

Green-Houses.

Too high a temperature and insufficient ventilation force plants into a spindling, sickly growth, and if continued destroys all vigor. As the weather is now growing warmer, care will be needed to prevent this. Except, perhaps, on occasional cold days artificial heat will not be required. The sashes may be removed almost wholly during mild weather, and the plants thus hardened for transplanting out. When the temperature rises quite high, give plenty of moisture by frequent syringings.

Bedding Plants—Propagate by cuttings, layering, and dividing roots, an ample stock of verbenas, petunias, geraniums, daisies, pansies, etc. These will be wanted the latter part of the month or or the first of May for the open border. Expose by degrees to gradually harden them for the change.

Bulbs in bloom should be shaded from too powerful light which will cause the flowers to wither sooner; they require plenty of air and water. Those that have passed out of flower may be planted out.

Callas—Keep them in erect position by frequently turning to the light. Give abundance of water and keep free from dust.

Camellias—Syringe freely and insert cuttings.

Cape Bulbs in flower should be brought forward to the light and have plenty of air to encourage the growth of healthy flowers. Keep them from the direct rays of very bright sunshine to prolong the blooming.

Cuttings of fuchsias, geraniums, myrtles, hydrangeas, camellias, jasmines, salvias and most other kinds, may be made. Choose well ripened growth, and insert in soil prepared from sand and leaf mold, place the pots where they will receive good bottom heat and shade, and water carefully. Hard wooded kinds which do not root freely, should have bell glasses placed over them to insure growth.

Head down shrubby plants that are stinted in growth and not thrifty, at the same time shift to new pots and cut out diseased roots.

Inarching may be performed this month on oranges, lemons, pomegranates, and other plants of shrubby growth. Full directions for the process are given in Vol. XVI, page 184 (August No.).

Insects require continual watchfulness. Where ants are troublesome, set sponges sprinkled with sugar, and destroy them by soaking in hot water. Syringing and fumigations with tobacco will keep many in check.

Mildew—This may be remedied by sprinkling flour of sulphur upon the plants where it appears. Dust it also upon the flues and wherever traces of it are found.

Pot off annuals previously sown that have attained sufficient size.

Pruning—Cut back and pinch in all straggling shoots that interfere with a well shaped head.

Sow seeds for green-house culture early. Geraniums, oleanders, aloes, cactuses, mimosas, euphorbias, cinerarias, solanums, etc., etc., should be sowed in light prepared soil, plunged in the bark bed for good bottom heat, and covered with glass. Many of these require even months for vegetating.

Shifting—When plants need more room, change them to larger pots on a mild day. Cut away dead or diseased roots. Place an inch or two of lumps of charcoal or broken crocks upon the bottom, set the plant with its ball of earth upon these and fill around it with fresh compost. Give fresh earth to plants that do not need transplanting.

Suckers springing from the various plants may be removed and planted for propagation.

Water should be given according to the wants of the plants. Those which are growing rapidly require a greater amount, than when partially dormant. Supply them only when the earth becomes dry.

Hot-House and Conservatory.

More air will be required as the heat is increased by the advancing season. During the middle of the day, or after ten o'clock in the morning if the temperature rises above 70° Fah. admit abundance of air by opening the roof lights, always being careful to avoid chilling the plants. Do not let the mercury fall below 60°. Fire will be necessary evenings, and cold windy days, the fruiting plants especially require uniform heat. Preserve the most scrupulous neatness. Pick off and remove all decaying leaves and branches and keep all plants free from dust.

Cuttings may be taken and managed as described above, under "Green-House." Bring a good supply of those there alluded to into these houses for quick starting.

Flowers in Pots—Continue to bring in from the green-house for blooming; introducing a few at a time to keep up a pleasing succession.

Fuchsias—Water freely those that are in bloom. Take cuttings to increase the stock.

Grapes—Continue to thin where needed. Cut back the laterals above the bunches to three leaves, and remove shoots between the bunches and the main cane. As the berries swell, support the shoulders of the bunches by tying to the canes above. Syringe freely, adding sulphur to the water to prevent mildew. Some of the vines have only burst their buds, and need little care at present

Insects will require continued watchfulness. Pick them off by hand, and continue fumigations with tobacco and syringing.

Pines are now about fruiting, and require moisture in the atmosphere but not so much at the root. To secure this, water the walks and flues frequently, thus producing artificial heavy dews. To secure large specimens of fruit, destroy the growth of suckers on a few of the most promising plants. This throws the strength of the plant into the fruit.

Propagate a large stock of both house and out-door plants for flowering in the borders, by cuttings, layers, and suckers as directed above.

Seeds of desirable hot-house plants may be sown now in pots, plunged in the bark-bed, and covered with bell glasses, or in their absence with a pane of glass laid over each pot. Water them occasionally. Shifting to larger pots will be required as in the green-house; the directions given there apply in this department.

Apiary in April.

BY M. QUINBY.

Continue to feed light stocks as they need it. There is always danger when bees are fed, that strong colonies will be attracted to rob the store thus supplied. For this reason it is best to feed only as much as is actually required, then in case of robbing, none will be wasted. Never feed to all the hives promiscuously, by placing it where all can have access to it. Keep the entrances of all the hives contracted in proportion to the number of bees in the colony, allowing more room where the stocks are strong....Do not fail to watch for indications of robbing on the first really warm days, their morality is severely tested before honey is supplied by the flowers, and bad habits are best nipped in the bud. This can be decided more readily late in the day, as they will continue to work until nearly dark if it be warm. Should they be detected in this work, remove the invaded hive to a dark room or cellar, and keep them there until two or three days warm enough for them to fly, have passed; then return it to the stand. Or, if practicable, the hive may be removed, at first, to a new locality a mile or more distant. To prevent the weeds and grass from growing about the hives, the surface of the ground may be covered two or three inches with spent tan or saw dust, when practical ble. The stands in a yard thus covered, need be raised only a very little, to be out of the way of grass and weeds, and are always dry enough for a bee to alight on it safely. The labor of preparing a yard in this way, will be quite as likely to make a paying return, as that of building an extensive bee-house....More moth worms may be found chilled in the morning on the floor of the hive this month and next, than at any other season ; they may be readily scraped out and destroyed....The flour feed recommended last month, should be given more sparingly, as they begin to get pollen from the flowers. It will probably soon be neglected altogether....Those having the movable comb hive, should avoid opening and exposing the interior in the middle of a warm day ; it might induce robbing at any time before the flowers yield honey. Early in the morning while the air is frosty, is not a good time on account of chilling the brood ; the air should be nearly warm enough for them to fly, before operating....As long as a colony is prosperous and healthy, it seldom pays to transfer from the box hive to the movable frames. But if it is decided to do it, now is the time for the operation.

Agricultural Lectures at Yale College.

The lectures and discussions at New-Haven, which were in progress when we went to press last month, closed up with the highest satisfaction to all concerned. During the course, about sixty lectures, of an hour or more each, were given, generally at 11 A. M., 2½ and 3½ P. M., and occasionally in the evening. Almost the whole of each day, not devoted to the lectures, was occupied from 9 A. M. to 9 P. M., and later, in discussions, part of the time in formal meetings at the Hall, and at other times by groups gathered at the hotels, or rooms of individuals. It is certain that at no other time in the present or the past, has there been such a thorough talk between practical men upon the subject of agriculture generally, including general soil culture, stock raising, etc., and upon horticulture, including fruit growing, and general gardening. We believe nearly two hundred persons were present throughout the whole course, while four to five hundred attended during part of the time. It can not be otherwise, than that most of these persons gathered many new ideas, and that every one carried home much material for after thought, all of which will tend to modify and improve practice.

The gathering was eminently one of practical men, including not only those who were called upon to deliver formal lectures, but also those who took part in the discussions, and those who attended merely as listeners or students. The leading lecturers were not wordy, self-styled professors—those who could write and talk on any subject better than they could practice, but they were those whose prestige and reputation resulted from what they have *done* in their several pursuits. For example, it is worth while to hear and talk with such men as Cassius M. Clay and Lewis F. Allen on the selection and breeding of cattle—men who have attained reputation and eminence by their successful labors in the business. We might say the same of Wilder, Grant, Barry, etc , who talked on fruit growing, of Fitch on insects, Johnson on agricultural chemistry, and so of others. Almost every farmer would make quite a journey, to sit down and talk familiarly with any one of these men with regard to their specialties. Those attending the convention at New-Haven, enjoyed such intercourse with many of the class of men referred to.

Most of the lectures were familiar talks, rather than formal discourses, and the speakers generally allowed themselves to be interrupted at any time just as pupils would question a teacher in the school room. After an address of this kind, the lecturer usually sat down upon the stand, and answered a multitude of queries on the subject of the address. This, and the sta' discussions, we consider among the most valuable features of the convention. Any skillful speaker can make up quite a lecture from books, but it is a far different thing to discourse of his own views and practice, and be ready to give reasons drawn from his own experience and observation, for the faith that is in him, and the suggestions he may offer.

We repeat, that the arrangements and exercises were highly satisfactory to all who accepted the invitation to be present—we wish they had numbered by thousands, instead of by hundreds—and this satisfaction was expressed freely, not only in private conversation, but by formal resolutions at the close, giving a hearty and unanimous vote of thanks to Prof. Porter, who was chiefly instrumental in getting up and carrying on the enterprise, and an equally unanimous request that a like convention should be called during next Winter.

We are glad to feel assured that this will be done, and that in all probability we shall have a continuation of similar meetings from year to year. A large sum, over $40,000 we believe, has already been contributed toward the erection of commodious buildings for the Yale College Scientific and Agricultural School, and during the Summer, a complete set of models and paintings of animals, of different kinds of agricultural implements, of fruits, etc., will be gathered for use in illustrating future lectures and discussions. The experience of the past will afford valuable suggestions for future plans and arrangements. It may be early to talk of the matter, but every cultivator, who can possibly do so, should, in laying out his plans ahead, make arrangements to attend a month at New-Haven next Winter.

Report of the Proceedings.—Several persons have inquired, whether *full* reports of the doings and sayings would not be published. This would be entirely impossible—a dozen dollar volumes would hardly suffice for the purpose ; and further, no complete record was kept. Several daily and weekly journals were represented, and very condensed outlines of a part of the sayings were published. We have copies of these reports, besides some fifty manuscript pages of our own notes upon the talks about domestic animals alone. These written out, would fill several hundred pages. We intended to have given an instalment in this number, but have neither time nor room left. All we can promise, is to give the gist of the matter in future articles upon the several topics, with perhaps occasional extracts from the leading lectures and discussions.

How to Conduct Experiments.

A correspondent writes that he planted a bushel of one kind of potatoes, cutting them into pieces containing one or two eyes, and dropping two eyes in a hill, which returned him 56 bushels. A bushel of other kinds treated similarly, gave but one third or one fourth as much, and hence he concludes the first named variety is greatly superior. This, quite likely, is the case, but the account of the experiment does not prove it ; for some varieties of potatoes contain many more eyes than others, bushel for bushel, and would, if planted in the method described, occupy a larger plot, which would be likely to yield the greatest return for the amount of seed used. As no statement was made of the space covered by each kind, we can draw no correct conclusion In conducting experiments like the above, every fact bearing on the matter should be noted at the time of its occurrence, and written down ; then nothing important will be lost by forgetfulness.

There is frequently a failure to place the different subjects treated, under the same conditions. Thus, in comparing several sorts of grain, if large patches, say of an acre or two each, are sown in different portions of the field, there may be so great a difference in the soil, exposure, etc., as to materially affect the results. The level at the foot of a hill is more favorable than the slope, a bed of sand underlying one patch would afford better drainage than would be enjoyed by another plot resting upon clay. Uniformity should be secured in such cases, by sowing alternate narrow strips, the whole length of the field.

Experimenters often try to ascertain too many things at a time ; thus : a person planted several varieties of corn, to test their comparative yield, and attempted also to decide the value of different fertilizers by using a separate one on each kind planted. But when the crops ripened, it could not be determined whether the greater yield of one sort was a result of its own peculiar habit, or the effect of the special manure used.

One season's cultivation is insufficient to test any plant or mode of culture. The weather may be unpropitious, insects may prevent success, or failure may result from influences discoverable only after years of trial. If every cultivator would each season try some one experiment, carefully note all the facts of the case, and communicate them for the benefit of others, the statistics thus obtained, would push the science of agriculture forward with rapid advances.

Hogs at the West.

In our February issue, page 40, we presented a table, showing the number of hogs packed during 1858 in sixty-two of the principal Western towns. The statistics have now been made up for 1859, and we give below very interesting tables, exhibiting the aggregate of hogs packed both in 1858 and 1859, in eight of the principal pork-raising States, together with a statement of the average weight of the dressed hogs, the average yield of lard per hog, the aggregate yield of lard, etc.

Number of Hogs slaughtered at the West, during each of the last two seasons:

	1858–9.	1859–60.		1858–9.	1859–60.
Ohio......	638,397	680.858	Missouri..	163,774	190,260
Indiana...	412,289	404,046	Iowa......	163,914	166,936
Illinois....	591,380	504,935	Wisconsin	33.932	54,500
Kentucky.	397,117	320,487	Tennessee	65,172	26,800
Grand Totals..................				2,465,035	2.350,822
Decrease....................					114,213

Average weights of Hogs; also yield of Lard per Hog.

	Av. weight ℔ Hog.		Yield of lard ℔ Hog.	
	1858–9.	1859–60.	1858-9.	1859-60.
	lbs.	lbs.	lbs	lbs.
Ohio	190	191 6-19	26	26
Indiana.............	185½	192¼	23	27
Illinois.............	187	191	27	30
Kentucky	219	197	36	31
Missouri............	190⅓	194 2-9	25	26
Iowa................	181	192⅜	28	29
Tennessee..........	212	189	28	26
Wisconsin..........	230	207	28	29

These aggregate weights of *equal* numbers of Hogs each year, compare as follows :

1858–9. lbs..401,786,362
1859–60, lbs..402,294 695
Decrease 2,491,667

This is about equal to 11-16 of 1 per cent.

The total yield of Lard in each State is as follows :

	1858–9.	1859–60.		1858–9.	1859–60
Ohio.lbs	16,470,772	17,629,144	Misso'ri	3,769,350	4,848.220
Ind.....	9.257,017	10,665,783	Iowa ...	3,771.402	4,840,144
Illinois.	15,967,260	15,148.050	Wis	950.096	1,580,500
Ky......	14,260,212	9,991,097	Tenn...	1.824.816	696.800
Total lbs..................				66,276 925	65,406,738
Decrease....................					870,186

This decrease is equal to slightly over 1¼ per cent.

We have the following result for 1859–60 :

Decrease in No., 4⅝ per cent. equal to 114,213 Hogs.
Decrease in wght, 11-16 of 1 p. cent, equal to 16.946
Total decrease 131,159

This is equal to 5⅜ per cent less than the crop last year, 1⅜ per cent less than the crop of 1857–58, but 16⅜ per cent greater than the crop of 1856–57. Shipments to the East this season and last, as far as ascertained, from Oct. 1 to Feb. 1, were 277,120 in 1859, and 214,037 in 1860, showing a decrease of 63,083.

Shade the Road-sides.

On a certain highway, in a town familiar to us, many of the native forest-trees were left standing by the first settlers, at intervals of fifty to a hundred feet, and the road winds among them in curves as graceful as could be drawn by the best landscape-gardener. These trees are mostly of elm, maple, and white ash, and are now quite venerable with age. That road is the favorite resort of pleasure-riders in summer. And why? Plainly, as the whole community declares, because of the grand old trees and the winding road, and nothing beside. It might not be best to have trees *scattered about* in every highway, as they are here, but trees should be there somewhere, and, most properly, by the sides of the road.

What attracts city-residents into the country during summer? Nothing more powerfully than the shaded roads and walks of our villages. It is the rows of thrifty maples and elms before them that make the homes of our villages look so comfortable, and that make a summer morning or evening walk in the neighborhood so pleasant. Do not these embellishments also enhance the value of one's property? Do they not pay more than legal interest on their cost?

That's all very well, says an objector, but I have set trees by the roadside, year after year, and got nothing for my pains; they have all died. Horses have gnawed them, street-cattle have rubbed against them and broken them down, boys have hacked and girdled them, and one after another they have all died. I have got tired of working for the public.

Indeed, sir, there is truth and force in your complaints, but keep patient, and think again. How did you plant your trees? I saw a neighbor of yours set out trees before his house precisely thus: He went to the woods *with his ax*, (not his spade,) cut a circle around the tree chosen, about the size of a half-bushel measure, pried the trees out of the ground, and then, hailing the first lumber-wagon that passed by in the road, got them carted home. He then dug holes about the size of the roots of his trees, in soil quite hard, set in the trees, threw on a little dirt, smoothed off the surface of the ground quite complacently, and his work was done. The trees were from twelve to fourteen feet high, and the top branches were not shortened in at all to balance the mutilations of the roots. These trees nearly all died a lingering death. Were your trees planted so? And do you do well to be angry, if they die? Nay, verily. But try again, and do better.

Some persons who have no knowledge of tree-planting, and no time for doing it, employ itinerant tree-pedlers to set them out and *warrant* them, for a specified sum. This may sometimes answer, but it is a bad practice. If a tree is warranted to live, the proprietor is apt to neglect it: drouth may scorch it to death, cattle may rub it down, or boys swing upon it, but it is no concern of the owner, for was it not warranted? Moreover, the owner will get less enjoyment out of his trees. For this end, he ought to select and dig up (or help in digging) his own trees, set them out, protect, water, mulch, dig about them, and do whatever may be necessary for their welfare. That's the way to enjoy trees, and to succeed with them.

Care should be taken in selecting trees for transplanting. They should be symmetrical, vigorous, and taken from dry land, and from open and exposed situations. They should not be dug up in haste, or rudely. A trench should first be opened around the tree, several feet off, more or less according to its age, and as many as possible of the small roots saved. A crow-bar should seldom if ever be used to pry out a tree; the roots will very likely be split or marred by the operation. A better way is to actually unearth the roots, by digging all around and under them, until there is nothing left to bind them to the ground: then lift the tree, and carry it away.

But with the best care, some trees—such as the oak, tulip-tree, and magnolia—are hard to transplant, after they have attained much size. Their tap-roots are difficult to manage. The surest way to succeed with them is to take two or three years for it. First: cut a trench around one side of the tree, cutting off the extremities of the roots with a sharp spade or pruning knife; then cut off the tap-root which strikes down deep from the central part of the tree, and afterward fill up the trench with dirt, as carefully as possible. The tree will suffer no material injury from the operation, and will at once form new roots in a lateral direction. In a year or two it may be transplanted with safety.

Now, let us return to those cattle and boys who injure our shade trees. A community is but half-civilized which allows cattle to roam at large, trespassing, as they do continually upon gardens, door-yards and grain-fields. Perhaps a little combined effort among the leading citizens of a place would bring about a change in this respect. Failing in this, we should protect every tree with some substantial guards, made of scantling and slats. If every house were provided with good hitching-posts, horses would seldom be tied to our trees. Yet, some vigilance might still be needed to remind the thoughtless, and to warn off wilfull trespassers. As to the boys, a few kind words, with an occasional seasoning of firm remonstrance, will go a great way. It is rare that these "hopes of the nation," these "possible Presidents," will long or wilfully practice such barbarities. At any rate, don't let us magnify our difficulties, but rather overcome them by planting more trees.

Irrigation.

Irrigation, or flowing water over grass lands is but little practiced anywhere in this country. Every one may see an illustration of its benefits in those fields that lie on the lower side of a road, where the path-master has turned the water from the highway on to the adjoining land. Some manure falls in the road, and the soil is pounded up very fine by the continual trampling of feet and the rolling of wheels. This fine dust and manure is carried off by every shower, and spread over the meadow. It is noticed that all along such sluice-ways the grass grows very luxuriantly, often lodging. The same thing is frequently seen about barns and dwellings. Sometimes the barn-yard overflows in very wet times, and wherever the water flows off over the adjoining field, the effect is seen in the increasing luxuriance of the grass through the summer.

The advantages of irrigation have long been understood in England, and are beginning to be appreciated in this country. The most astonishing results are recorded from this process. A recent letter from one of the best farmers in Putnam County, who has had over forty years of experience, and who has one of the best grazing farms in the State, speaks of Irrigation as the greatest of all his improvements. This matter was up for discussion at the last Fair of the Broome County Agricultural Society, where it was claimed to be the cheapest method of enriching grass lands, securing, under favorable circumstances, four tons of hay to the acre. There can be no doubt of the utility of the measure, where there are small streams running through farms, that can be controlled for this purpose.

The time of this artificial irrigation is from late in the Fall until Spring, when the grass is well started. The dam is constructed and furnished with a gate, which gives the operator the control of the stream. The best time for putting on the water is in rainy weather, when the snow is melting, and the water is muddy. The more muddy the water the more valuable it is for irrigation. The snow and rain water contain appreciable quantities of ammonia, and this has a surprising influence upon the growth of grass.

Sometimes the bottoms of these artificial ponds are plowed, when they are dry, during the Summer, for the purpose of furnishing sediment to the stream in the Winter. If the pond be but a few inches deep, it is stirred up with a team and harrow, when the gate is hoisted and immense quantities of earth are carried off in this way, and distributed very evenly over mowing fields. It imitates, on a small scale, the overflowing of the Nile or the Mississippi. The great value of intervale land is owing to the annual deposit of mud left upon them by the streams that overflow them. The soil of a small part of the farm is sacrificed to enrich the rest, for the land devoted to ponds can not be used for other purposes. Even the subsoil, especially if it be clayey, has an excellent influence when deposited as a sediment over meadows.

There are thousands of farms all over the country that have streams available for irrigation. Sometimes half the farm is so situated that water can be turned over it. It is one of the most inviting fields of experiment open to the farmers who enjoy this facility. In many cases the streams are so situated that they can be turned over the adjoining acres at very small cost. Four tons of hay to the acre upon land that now grows one, is an object worth looking at.

Horse Radish.

Perhaps there is no vegetable so really useful, that is treated with so much neglect as the Horse Radish. Scraped into shreds, or grated fine, and soaked in vinegar, it becomes an excellent condiment for fresh meat and fish; it has medicinal uses also, in cases of dropsy, scurvy and rheumatism. It stimulates digestion, excites the glands into action, and warms up the blood in a healthful manner. Aside from all domestic uses, it is worth raising for market. Large quantities are annually bought up by pickle manufacturers, ground and packed in closely corked jars and bottles with vinegar, for sale in this country, and for exportation.

Culture.—It will grow without culture; but to raise it in the best and most profitable manner, it should be treated with some care. Choose a spot of good sandy loam, rather inclining to moisture. Lay off as much space as can be devoted to it, give it a good trenching, and work some old manure down into the lower part of the trench. This will prevent the formation of weak side-shoots or prongs, and will favor the growth of large and long roots. After spading and leveling the ground, make holes for the plants eight or ten inches apart, in rows one foot apart. These plants may be cuttings taken from the buds or crowns of old plants; in which case, they should be set in holes near the surface. Or they may be taken from the lower part of the root, in pieces two inches long; in which case, the cuttings should be set a foot or so in depth. Either way will do.

When roots are wanted for table use, uncover one end of a row to the depth of the roots, so that the whole plant may be taken out without breaking. It will be found that plants grown in this way, greatly excel those left to shift for themselves. *

A Dwarf Broom Corn.

This is to us a novelty, and it has every appearance of being valuable. During the Winter Mr. E. B. Good, of York Co., Pa., sent us an account of it, and we desired him to forward some specimens of the entire stalk, including roots and brush, which he did, stating, that the samples were of about the average size, but not so fine as he could have furnished, had we applied earlier. We were so well pleased with them, that we suggested his advertising the seed, if enough could be got to make it worth while, and he has done so. (We have recently procured a moderate quantity of the seed, which will be offered as premiums only. See one of the closing pages of this paper)

The specimens before us have about two feet of stalk and two feet of brush, the latter being of very excellent quality. As this is not half the hight of the common variety, it may be grown much thicker on the ground. The upper leaf-sheath embraces the lower part of the brush, which, with its low growth, saves all necessity of breaking down the brush while ripening. As far as we can gather from the statements received, and from the specimens, we think it likely this may be decidedly superior to the kind generally cultivated. It is certainly worthy a trial, and for this purpose only we offer it for limited distribution. We shall test it the coming Summer, and we request reports from those who may receive the seed. Mr. G. states that it should be grown thickly in the rows, to secure the best development of brush.

Spelt.

GERMAN WHEAT—SPELT WHEAT—DINKEL—(*Triticum spelta.*)

The above names are all applied to a variety of wheat, grown extensively in Germany, and also in the southern part of France, in Switzerland, in Italy, in some parts of Spain, in the north of Africa, and at the Cape of Good Hope. Small importations of seed have been made to this country, but after several inquiries at seed stores in this city, (in response to the request of Mr. Foley, of Tioga Co., Pa , and two or three other subscribers,) we have been unable to find any of the seed, and have never seen it growing. From the description we find in foreign works, this grain would seem to be worthy of trial in some parts of our country.

Spelt belongs to the Triticum or wheat family. There are Winter and Spring varieties. There are also the awned (or bearded chaff,) and the awnless. The bearded variety is most cultivated, but the chaff can not be removed by ordinary threshing, a mill being required for this purpose, similar to a rice mill. For sowing, this chaff need not be removed.

Dr. Wm. Löbe, a German author, in his Handbook of Rational Agriculture (*Handbuch der rationellen Landwirthschaft*) for 1858, says: The Dinkel (spelt) is better protected than the common wheat, by its strong husks, against the injurious influences of a rough or wet climate, and therefore less subject to smut. It can be grown on a lighter soil; is less exhausting; suffers less from rain; can be sown later in the season; is less exposed to ravages by birds; and gives the finest flour, while its straw is better adapted to feeding to horses, because less stiff or woody. This last characteristic, weakness of the straw, is, however, an objection on account of the liability of the heads to break down when over-ripe. Generally, the dinkel is grown where the conditions of soil and climate are not all favorable to the culture of common wheat.

After describing the several varieties of Winter and Spring dinkel, including both white and red, Dr. Lòbe says, the culture of Winter spelt or dinkel is very similar to that of common Winter wheat, except that the dinkel does not require so fertile a soil as wheat: it thrives better than wheat, after potatoes, turnips, flax, and peas. As it is sown with the husks on, about twice the bulk of wheat seed is required. It is often grown mixed with rye, about one fifth of the latter, and the mixed product ground together for bread making. Spelt and wheat should not be grown mixed. Spring spelt is cultivated the same as Spring wheat. The removal of the husks is done in a burr-stone mill, as stated above.

According to the accounts we have, spelt would seem to be best adapted to our southern and south middle States, though we hear of its having succeeded well in one instance in Scotland, at a hight of 600 feet above the level of the sea. It has probably been tried on a limited scale in some parts of this country, but we are not aware at what points, nor with what success

A Live Farmers' Club.

To the Editor of the American Agriculturist:

....We have a very pleasant, interesting, and I think profitable Agricultural Society (in a small way) in our neighhorhood. It is limited to fifteen members, who meet once a month at the residence of one of the number, dine, and discuss some subject pertaining to agriculture, agreed on at the previous meeting. The society as "Committee of the whole," examine to some extent the premises of each member in turn, but a special committee of three is appointed to *minutely* examine the farm, crops, fencing, stock, implements, etc.—and present to the next meeting a written report to be put on file, of the condition in which they find things. If good, and worthy to be commended, it is done; if otherwise, the brother is not spared—so that once in fifteen months each member is brought under the screw.

In addition to this ordeal the brother's character as a farmer passes through once in fifteen months, and there is a constant watch over each other. This is manifested in the humorous jokes played off at every meeting; for if a member sees any thing amiss on a brother's farm, he is sure to speak of it. This you may be sure makes us, and keeps us, more particular.

Talbot Co., Md. G. W. Harrington.

[The plan contained in the above extract from a business letter, is excellent. Emulation and fear of ridicule are among the most powerful stimulants to action, and we predict that each member of that association will be made a better farmer. The good dinner provided—especially as our correspondent says alcoholic drinks are excluded—will promote good humor, and prepare the company to appreciate and submit to the "sharp hits" provoked by careless or unthrifty management. We place this institution on the list "as worthy of general adoption."—Ed.]

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The *London Punch* says that the reason why editors are so apt to have their manners spoiled, is because they receive from one correspondent and another, such a vast number of evil communications. Does Punch speak from experience?

Not Advertising Information Gratis.

HOW TO "RAISE THE WIND."

We have a capital plan for "raising the wind." that is, making money easily, which we shall not patent, but throw open to the free use of all our regular paying readers. All others who adopt the plan, are expected to send us in advance "One Dollar" in payment for the secret. Here is the plan: Go to some distant Western State; select a plot of ground, no matter what its character; buy it at the government price of \$1¼ per acre, or less if "swamp lands"; draw up a map of it, cutting it into city lots: plant yourself at some out-of-the-way Post Office, in an Eastern State, (the more out-of-the-way the better for your safety); employ in some adjacent city an unscrupulous Commissioner for the State where your land is located, to sign your deeds; draw up a splendid map of your property, being sure to locate it on one or two railroads, present or *prospective*; print a lot of flaming hand-bills and plausible circulars, showing that your city *must* soon be an immense one, and *each* lot be worth thousands of dollars, and scatter them through the country; in these offer to *give away* a LOT to each of the first 500 or 1000 applicants, who sends you simply "one dollar" to pay the Commissioner's fee for acknowledging the deed; tell them as a reason for thus offering them these lots *free*, that you want them to aid you in directing emigration to the vicinity of the prospective city.

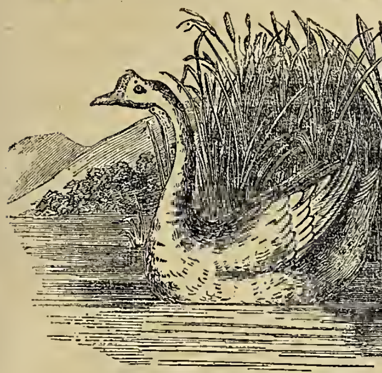
You will find fools enough to snap at the bait, and the dollars will pour in like a hail-storm. (Of course, you need not stop giving away lots, so long as the dollars come; the buyers will think only 500 lots are given away, but you need not tell them to the contrary.) Now see what a fortune you can make: You buy 3125 acres which, at \$1¼ per acre, will cost you \$3906, or say \$4000, and this you cut into 50,000 City lots. Your printing of circulars, blank deeds, etc, advertising, and postage, will cost about \$4000 more. You will need to pay the Commissioner perhaps \$2000 for signing the deeds. You "*give away*" 50,000 lots, and get back "commissioner's fees of \$1 each," or in all \$50,000, making a net profit of \$40,000! Is anything more simple?

To prove the feasibility of this enterprise, we have only to say, that the thing has been done, and *is now being done*, and will continue to be, until the "fools are all dead," so that no more dollars can be got.

Our readers, who are receiving and sending circulars of enterprises like the above to the *Agriculturist*, will understand its drift.—"*Wise men never buy a pig in a bag.*"

Those Italian Bees.

From what has been said by Mr. Langstroth in regard to these bees, and from sundry newspaper items and advertisements, a good deal of interest has been awakened in regard to them. We have no opinion to give. They have not been tried thoroughly in this country. They may be all that is claimed for them, but we must confess to a little surprise that a variety of bees, having such superior merits as are claimed for these, should not have been, ere this, more widely distributed throughout Germany and other parts of Europe, and even in Italy itself. We will hope for the best, and give due credit to those, who are willing to invest their time and money in a trial of them. Those who do so, will do it on their own account, and not upon *our* recommendation



For the American Agriculturist.

White Chinese Geese.

The White Chinese goose was brought into notice a few years ago in England, by a Mr. Whitaker, who speaks of it in the following words: “ The White Chinese goose is of a pure, spotless white, more swan-like than the brown variety, with a bright orange-colored bill, having a large orange-colored knob at its base. It breeds three or four times in a season, and its period of incubation extends to five weeks. They are prolific layers, but their eggs are small for the size of the bird, being not more than half the size of those of the common goose. The Spring goslings are easily reared, and are of fair average quality for the table. The disparity in size between the sexes is considerable, not unfrequently amounting to over one third of their relative weights.”

This variety, of which our sketch is a good representation, is invariably more beautiful, and superior in every respect to its brown relatives. Its color, as its name indicates, is a pure white, which, contrasted with its yellow or orange-colored bill and legs, gives quite a pleasing effect, and it certainly deserves to rank in the first class of ornamental poultry.

They are beautiful birds either in or out of the water; the neck being long, slender, and gracefully arched when swimming. They are larger and less erect than the Brown Chinese, and apparently more terrestrial in their habits; the knob at the base of the bill is not only greater in proportion, but of a different shape. If they were only a variety of the Chinese kind, it is a question whether the bill would not retain its original jetty black, whatever change occurred in the feet and legs, instead of assuming a brilliant orange hue. If they were albinoes, the bill would be flesh-colored, and the eyes pink, not blue.

Their movements on the water are very graceful, and their appearance is more like the swan than the goose. A quiet lake or pond is more to their taste, and more conducive to the fecundity of the eggs, than a swift running stream. It is delightful to see a flock of them on a fine day in Spring, lashing the water, diving, skipping, and rolling over through mere sport, and playing all sorts of antics. The gander is inclined to libertine wanderings, without, however, neglecting to pay proper attention at home. If there is another on the premises, there will be war at once, and one of the two should be disposed of. They are, if possible, more noisy than their dusky cousins; in the night, the least footfall in their vicinity will call forth their clamor. Any fowl stealer would be stunned with their din before he could capture them alive, and the family must be deaf indeed not to be aroused on the alarm thus given.

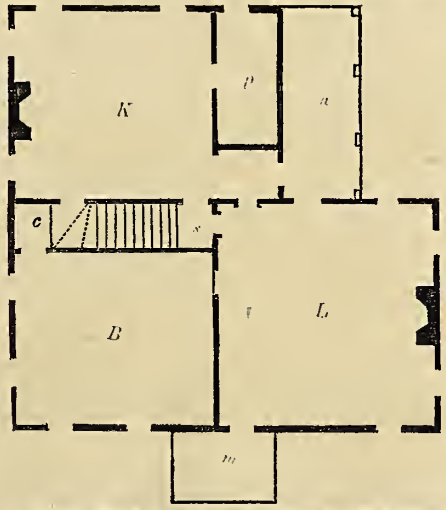
In point of longevity, they are said to be far from equaling the common domestic goose. Economically considered, they must, we think, yield precedence to the larger, better shaped, and better flavored Bremen. C. N. Bement.

Farming as a Whole does Pay.

“ One swallow does not make a Summer,” and a single case of success, in tilling the soil, does not prove that farming pays. The *average condition* of our farming population is, doubtless, the best evidence of the reward of husbandry. At the last census, there were in the State of Connecticut about 22,000 farms, generally occupied by their owners, who cultivated, on an average, about eighty acres each. The value of these farms, with the tools and stock, was estimated at about eighty-two millions of dollars. This is an average of thirty-seven hundred dollars to every farmer, invested in his business—to say nothing of the sums in bank stock, western lands, railroads, manufactories, and other enterprises. The productions of these farms, consisting of hay, grain, roots, slaughtered animals, butter, cheese, home manufactures, etc., was estimated at about eighteen millions of dollars. This would average to every owner of a farm, an income of over eight hundred dollars, exclusive of house rent, and fuel, and interest money. We doubt if any other class in the community, embracing so large a number of individuals, can show as much *average* wealth. Why should so many of our sons quit the plow for other more hazardous callings, when they have before them the moral certainty of success in cultivating the soil?

Plan of a Cheap, Convenient House.

In pursuance of our design to present plans of dwellings suited to a variety of circumstances, we in this number introduce one of a cheap, convenient house, contributed to the *Agriculturist* by Mr. J. S. Peers, of Madison Co., Ill. Accompanying the sketch he writes: A house may be very beautiful in its external appearance; it may even “ fill the eye;” but if those who spend their lives inside, are daily compelled to walk two or three miles extra, on account of its ill arrangement, and the separation of the rooms, this fact alone will counteract the beautiful external effect, and ‘leave a sting behind.’ The first considerations should be, *comfort, convenience, and economy of labor.* Therefore, the “ Living Room ’ should be the largest and best in the house—the most cheerful and the most convenient. The plan I send speaks for itself. Here the living room opens directly into the kitchen, the stairs, and the family bed-room. [Remarks.—This plan is certainly convenient for a small family, at least it is arranged to “ save steps.” For a small family, where the housewife attends constantly to the labors of the kitchen, and has little help, the plan may be as good as any that can be adopted. There are, however, objections that should be remedied, wherever practicable. There should be more closet room on the first floor—the “ running after things,” up stairs or down, involves much labor. This plan would be improved by having an opening from the kitchen to the family bed-room, so that the latter could be used as a sitting room, allowing the living room to be kept more as a parlor or spare room. The bedroom is large enough to be used as a nursery, or children’s room. One of the chimneys should be so placed that a stove-pipe could reach it from the bed-room. Whenever practicable, it is desirable to introduce between the kitchen and sitting room or parlor, a short hall, or closet, having a passage through the center, and drawers and shelves on either side. The two doors, one from the kitchen, and one from the other room, prevent a free passage of steam and gases from the kitchen. No chamber plan is given herewith. This can of course be arranged according to the size of the family, present or prospective.—Ed.]



L, Living Room and Parlor, 20x20 feet—*K*, Kitchen, 18x18—*B*, Bedroom, 18x16—*p*, Pantry, 12x6—*c*, closet—*s*, stairs—*m*, Front Porch—*n*, Piazza, 18x7.

Scientific and Practical Talks About Manures....IV.

(Continued from page 68.)

Before taking up the mode of treating, and the time and manner of applying manures to the soil we must devote a little more attention to their composition and the probable value of the different kinds of fertilizers. By a fertilizer, or manure, we mean any substance which will directly or indirectly supply food to increase the growth of any plant. It has been stated that all plants are *chiefly* made up of four volatile elements, which are dissipated or driven off in an invisible form, when the plant decays, or is burned in the open air. These elements are *Oxygen, Hydrogen, Nitrogen* and *Carbon*. It has also been shown how these elements are obtained and applied, when we wish to increase the growth of a plant by giving it more food.

So far we have spoken of all plants as being entirely, or essentially, made up of these four organic elements. But we must now take into consideration the non-volatile portion, viz.; that part which is left in the ashes when the plant is burned, or when it decays. The ashes not being volatile can not be driven off by heat, nor be carried into the air by evaporation or decay, and for the same reason they can not be supplied by the air, but must come from the soil. These ashes being made up of various mineral substances, as potash, soda, lime, magnesia, etc., we will for convenience call them the *mineral elements* of plants, and the substances used to supply them to plants may be called

Mineral Manures.—When plants of various kinds are burned, there remains an amount of ashes equivalent to only about one part in every fifty, on the average. Some plants contain scarcely one part of ashes in the hundred, while others yield much more than two parts in the hundred. In some cases, 100 lbs. of *dried* tobacco leaves have furnished as many as 25 lbs. of ashes. But this is an unusual per centage; about 1 lb. of ashes to each 50 lbs. or 60 lbs. of most dried plants, may be taken as the average.

Now comes up the important question: *Are these ashes essential elements in the plants—do they form such a part of the substance of the plant as to be necessary to its construction or growth—can the plant not exist in perfection without the presence of these ashes in definite fixed proportions?* Or, are these ashes to be considered as superfluous material, drawn into the plant from the soil by the sap, and left there by the evaporation of the sap through the leaves and bark? This is an interesting point, as will appear when we state that the theory of manuring, as taught by most agricultural chemists, is based upon the supposition that the ashes are the most important part of the plant to be looked after.

The reasoning is somewhat like this: "The organic portions of the plants—constituting say ninety eight parts in every hundred—are made up of four elements that are *always* abundant in the atmosphere; and from this source (the air,) the plant can readily get their organic elements. But the mineral elements of the ashes, or a part of them, are not always abundant in the soil. Therefore, the plant having an ever abundant supply of the organic elements, we have only to look after supplying the inorganic elements—that is, the minerals in the ashes."

This is the substance of the theory adopted at one time, and still partially adhered to, by Liebig, and by most agricultural chemists. The theory is at once beautiful and plausible, and it is hardly to be wondered at that it is readily fallen in with by theoretical chemists generally, and by the novitiate in the science of agricultural chemistry.

Starting with this plausible theory, the efforts of agricultural chemists have been directed to ascertaining the composition of the *ashes* of various cultivated crops, and of the soils upon which they grow, to the end that the deficient mineral elements may be supplied to the soil.

The chemists have been strengthened in the above theory by finding in the ashes of the same plants grown on different soils, an apparent similarity in the kinds and proportions of the various mineral elements. Thus: in 1000 ounces of the ashes of wheat, there have been found about 500 ounces of mineral phosphates; 250 ounces of potash; 120 ounces of magnesia; 80 to 85 ounces of soda; 25 ounces of lime; 7 ounces of iron; and 3 ounces of sulphuric acid.

Allowing these figures to represent the general composition of wheat ashes, the conclusion has been, that of these minerals, (phosphates, potash, soda, etc.,) there must be in the soil, and available to the roots, for every ten bushels of wheat, about 6 pounds of phosphates, 3 pounds of potash, 1½ pounds of magnesia, etc.; and that in their absence, the supplying of these several mineral elements in the proportions named, will furnish the necessary aliment for the wheat crop. For other plants, different mineral elements, or different proportions of those above named, are supposed to be essential. As stated in a former volume, Liebig, and others, after adopting this theory, commenced prescribing special fertilizers which severally contained the supposed requisite mineral elements for the different crops. Thus, a manure for wheat contained, say 500 lbs. of phosphates, 250 lbs. of potash, 120 lbs. of magnesia, 83 lbs. of soda, 25 lbs. of lime, etc.; while a turnip manure contained only some 60 lbs. of phosphates, 400 lbs. of potash, 50 lbs. of magnesia, 108 lbs. of soda, 125 lbs. of lime, etc. Such specific manures were patented by Liebig himself, we believe, but they utterly failed to produce the expected results. The same theory is put forth by the present manufacturers of superphosphate of lime, and importers of "American" and other phosphatic guanos, etc. That there is some defect in this theory, the hundreds of thousands of dollars, nay, the millions of dollars lost by farmers in the purchase and use of *mineral* fertilizers, during a dozen years past, bear abundant testimony. We venture the assertion that not one farmer in a thousand buys any of these specific mineral manures beyond the second or third time. They have not proved profitable in practice.

Another idea growing out of the above theory was, and in some measure is yet prevalent, viz.: that since soils generally contain most of the mineral elements found in plants, it is only necessary to examine the soil chemically, to ascertain which element, required by the ashes of any particular plant, is absent, and then supply this one only. Thus, if a soil designed for ten bushels of wheat, contains abundance of phosphates, potash, soda, etc., but is deficient in lime, then all that is necessary is to supply the missing element. But since the ashes of ten bushels of wheat contain only 5 to 6 ounces of lime, how natural the conclusion of the enthusiastic agricultural chemist that "he expected to see the time when a man could carry to a field in his pocket all the *necessary* manure to secure a crop of wheat." We need only to say here, that after thousands of analyses of soils, this mode of ascertaining what mineral manures are needed for a particular crop, is nearly abandoned by all except quacks and humbugs who have a personal end to secure by keeping up and propagating the theory. Analyses of soils are continued by scientific men for the purpose of scientific investigation, but not now as being of practical utility in the application of manures.

But to come back to the question: are mineral elements, in definite proportions, essential to the perfect development of plants? There are strong reasons for supposing that some of the mineral elements are essential. We find certain of them always present, as for example, the ashes of wheat always contain more or less of phosphoric acid, and it would seem necessary that this should be the case, with this or some other material consumed as food, since our bones require phosphorus, and this must come from the food we eat. The same may be said of lime.

Still it is impossible to say that a wheat plant can not grow and perfect its seed without a definite proportion of phosphoric acid, or of lime, or of other mineral matter. Allowing phosphoric acid to be essential, we assert, that—all the analyses yet made to the contrary notwithstanding—it is still to be ascertained what is the exact amount of phosphoric acid necessary to the wheat plant; and so of the various other mineral elements found in plants. Further, it is yet to be shown that any soil, having the other qualifications requisite to produce a crop of wheat, does not contain an abundance of phosphoric acid and lime to supply the wants of the crop. This much is certain, that a soil of the ordinary depth may contain phosphoric acid enough for a hundred crops of wheat, and yet the skillful chemist may not be able to discover an appreciable amount of this element.*

All plants, and all animals (with the exception of the bones of the latter) are chiefly made up of the four organic elements. That several mineral elements are found in plants and in the bodies of animals, is not conclusive proof that these mineral elements are all needed there. A person may imbibe spring or well water containing, as it usually does, potash, soda, lime, etc., and these substances may be diffused all through the body, but the chemist on finding them in the blood or tissues, would not therefore consider them essential. A towel hanging down so as to touch a basin of sea water, would draw up a portion of the fluid, and along with it a quantity of salt, magnesia, lime, etc.; but the chemist on drying and burning the towel, and finding in the ashes the magnesia and lime, would by no means pronounce them *essential* constituents of the towel.

So the roots of a plant, standing in the soil, absorb water which, like spring water, contains more or less of the mineral elements of the soil. The water evaporates from the leaves, leaving behind the mineral elements thus taken up. The chemist, on cutting, drying, and burning the plant, finds these mineral elements thus *accidentally* present. Their amount and proportions depend upon the character and composition of the soils, and the amount of water previously evaporated and still circulating in the plant at the time of its gathering. What we are aiming at is, to show the little reliance to be placed upon that system of manuring which teaches to supply to the roots of the plant as fertilizers, those mineral elements which the chemist has chanced to find in the ashes of the plant. We do not yet know what mineral elements (how many or in what proportion) are to be considered *essential* to the growth and perfection of any one plant.

Illustration.—Agricultural chemists have all along claimed that silica is absolutely necessary to give strength and stiffness to the straw of wheat, oats, rye, etc. Prof. S. W. Johnson, in a lecture at the recent Agricultural Convention at New Haven, unsettled this theory, which has been considered one of the most firmly settled points of agricultural chemistry. Thus, he asked: If an abundance of silica gives the firm texture to the oat stalk, how is it that the leaves and chaff are so soft and pliable, when chemical analyses show that these contain three times as much silica as the firm straw? The answer would seem to be, that the silica has nothing to do with the strength of the straw, but that it is simply due to a close texture, and that the excess of silica found in the leaves and chaff is left there by the larger amount of sap evaporated from those parts. Silica (sand) is abundant in all soils, and is carried up by the sap, freely. A plant may be soaked and washed in a weak solution of potash, and then in one of hydrochloric acid, until all, or nearly all, of its silica and other mineral elements are removed, and it will still retain its form, texture, and strength. How then can we consider these mineral elements essential to its structure or growth?

These considerations, but a small part of what might be brought forward, are, we think, enough to vitiate the present current theories in regard to the value of this or that mineral manure. The present theories are too defective, too unreliable, to be a safe guide for practice. We are thrown back upon *experience* as our main guide. Experience teaches us that organic manures, animal and vegetable, and especially those containing much nitrogen, are those most likely to benefit growing crops. There are exceptions, as in the case of lime, potash, and gypsum ("plaster,") which on some soils are useful, and on others not. So far experience, or a trial of them, is our only guide for using them. We shall refer to these exceptions again, in discussing their use and mode of application; but it may be hinted here, that gypsum perhaps acts only as an absorber of ammonia; and that lime, and the other alkalies, may only serve the purpose of hastening the decay of organic materials in the soil, thus preparing them to give up their elements to the growing plants.

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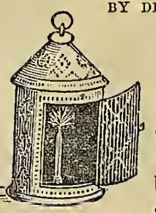
* Allow an acre to yield 20 bushels of wheat every year for a century, yet the total amount of phosphorus extracted from the soil would not exceed a pound for every 4000 lbs. of earth, estimating the soil at one foot in depth. The chemist in analyzing 100 grains of soil would find only about one-fortieth part of a grain of phosphorus, supposing there were only a sufficient amount for the 100 crops of wheat. This shows that a soil may contain phosphorus enough for alternate crops of wheat during 200 years, and yet the amount be so small, comparatively, as not to be discovered in an ordinary chemical analysis. And the same is the case with other mineral elements. There may be an abundance of them for all the wants, or supposed wants, of a great number of crops, and the quantity still be so small in comparison with the entire weight of a soil that their presence can not be determined by the most delicate tests of chemistry.

Blinks from a Lantern......XVIII.

BY DIOGENES REDIVIVUS.

PLOWING.



The plowman is afield once more, turning the sod with his stout team, and deep tiller, his whip over his shoulder, and the blackbirds in the furrow responding to his whistle. What a change in his circumstances since I, Diogenes, was in the flesh in olden time.

> "In ancient times, the sacred plow employed
> The kings and awful fathers of mankind;
> And some, with whom compared, your insect tribes
> Are but the beings of a summer day,
> Have held the scales of empire, ruled the storm
> Of mighty war; then with unwearied hand,
> Disdaining little delicacies, seized
> The plow, and greatly independent lived."

But could the present generation see the implement with which these awful fathers plowed the soil, not even their kingly state and grey beards would save them from ridicule. When I was a boy, I remember to have seen King Philip of Macedon at the plow-tail, with all his nobles looking on. The only pattern-shop of the plow in those days was in the branches of trees. Where a branch of four or five inches diameter forked, there was a plow in the rough. One branch of the fork was cut off to about a foot in length, sharpened and pointed with iron. The other branch served for the beam. A straight stick was fastened opposite to the plow nose, which was the only handle. The king employed a team of four bullocks, who were lashed to the plow with long thongs of cow-hide. The teamsters somewhat jealous of the royal invasion of the plowed field, drove fast at every stony place, and brought Philip to his knees. The peasants laughed at the sight of royalty in the dust. Not much damage, however, was done to the monarch's garments, for grass was about as plenty where the plow had been, as upon the untouched meadow.

The plow was little improved until modern times; indeed, it has been more improved in the present generation than in all previous time. Of so recent date is the perfected plow, that it has not yet been introduced into all parts of the civilized world. The Saxons used plows almost as primitive as those of ancient Greece and Rome, and not unfrequently hitched the plow to the tail of the horse. Even as late as 1634 we find the Irish Parliament passing an act against this custom. It is entitled "an Act against plowing by the tayle, and pulling the wool off living sheep," that "in many places of this kingdome, there hath been a long time used a barbarous custome of plowing, harrowing, drawing, and working with horses, mares, geldings, garrans, and colts, by the taile, whereby (besides the cruelty used to the beasts) the breed of horses is much impaired in this kingdome. And, also, divers have, and yet do use the like barbarous custome of pulling off the wool, yearly, from living sheep, instead of clipping or shearing of them."

It will hardly be believed, perhaps, that there are districts, in this country, where the plow is still a novelty, and plantations where the whole work of tillage is performed with hoes and human sinews. Yet such is the fact. Even where human sinews are quite too dear to be put to this use, we still find the plow of a century ago, with wooden mold-board, and wrought-iron nose. Not ten years ago, one-handled plows were on sale in a neighborhood on the Hudson River, and it would not be strange if they are still in use in that staid and conservative community.

The art of plow making is far in advance of plowing in this country. We have in the implement almost every thing desirable, good material, simplicity of construction, light draft, thorough efficiency, great variety, adapted to all classes of soils, and of crops. But the best plows, some of which have been brought out within the last ten years, are not generally introduced. Reading farmers, who want to get the most work out of every dollar they spend in tools, purchase and use them. But Andrew Stokes and his friends up in Pomptown have never seen one of them in use; they have never been inside of an agricultural warehouse, and firmly believe that the cast-iron plow of twenty five years ago, is the perfection of farming tools. There are many neighborhoods similar to Pomptown, where I have not been able to find, even with the light of my lantern, any good plowing. The tillers of the soil do not seem to be guided at all by the wants of the soil, or of the crops, in their plowing. The amount of the team they can spare, the length of the chain, or the strength of the whipple-tree, the character of the plow, or the pressure of other work, any one, or all of these, decides the depth of the furrow, and the fate of the field. A miserable scratching of the dirt, four or five inches deep, is still the best plowing seen in these districts.

Though this is the fundamental work in the improvement of the soil, we have not yet attained to any definite rules, or uniform practice. The science of plowing is yet some distance in the future. Still, all the experience of our most intelligent farmers, in this matter, is not lost. Principles, by and by, will be settled, and the best mode of plowing for a given soil, and a given crop, will be well understood.

It is already pretty well established, among observing men, that a deeper stirring of the soil is called for—yet this deepening should be gradual, regulated somewhat by the thickness of the black loam, and by the use of the manure heap. Perhaps the best rule that can be given, is to bring up to the surface an inch or two of the subsoil at every successive plowing, until you have made a soil fifteen inches deep or more. The farmer who has abundant stores of muck, and a large stock of cattle to work it over, may go down more rapidly. With compost enough, almost any sub-soil can be made abundantly productive.

As to the position in which the furrow slice is to be laid, there is a pretty general sentiment in favor of varying it according to the character of the soil, and the object which the cultivator has in view. If it be a green sward, and the object is to rot the sod, it should be laid as flat as possible. Prairie sod rots soonest when it is plowed about three inches deep, and left flat. If the soil is a heavy clay loam, and the object is to expose as much of the surface as possible to the ameliorating influences of the atmosphere, the furrow slice is left at an angle of forty-five degrees. The whole field becomes a series of ridges and hollows, more than doubling the surface exposed. The rains wash down these ridges, and the frosts disintegrate them, making the whole surface more loose and friable.

To gain the same object, the plowing is frequently done in the Fall, so that the field may have the full benefit of the Winter. When it is considered that every particle is frozen and thawed, and undergoes a mechanical change, perhaps a hundred times in the course of a winter, the influence of this usage will be better appreciated.

It is also found that the condition of the soil at the time of plowing, has a very important bearing upon the utility of the process. A heavy soil plowed just after a rain, packs into clods that remain unbroken all summer, while, a week or ten days later, it would crumble, and give free access to the rain and the atmosphere. The farmer should study the philosophy of the process going on before him as he follows the plow.

For the American Agriculturist.

The Economy of High Manuring—Experiments with Bought Fertilizers.

A neighboring farmer who is fond of experiments, last season put stable manure and harbor mud in competition with the concentrated fertilizers. The land selected for the experiment, lay in adjoining fields, and was as nearly of the same character as possible, a gravely loam, well adapted to corn. Both pieces consisted of several acres. The one was manured liberally with the mud and manure at the rate of about thirty cords to the acre. The other was manured with super-phosphate of lime, American guano, and Sombero guano, applied at the time of planting, and in sufficient quantity to have given him a full crop, if the estimates of the salesman were correct. The former field was hoed but twice, and yielded eighty six bushels of corn to the acre, with a large amount of stover; making grain and fodder worth about one hundred dollars to the acre. The other piece of corn was hoed three times, and yielded only sixteen bushels of corn to the acre, with about half the amount of fodder in the other piece, making the crop worth about twenty five dollars to the acre. The bulky manure was all made upon the place; the other cost money. The one field paid a handsome profit upon the labor of cultivation; the other brought him in debt. The experiment has established him in the faith that high manuring is the only true economy in farming. Rub in the manure, good measure, pressed down, and shaken together, and the like measure of grain will come out in the harvest. SHORE FARMER.

A HIGHLY MANURED YARD.—A subscriber writing from Virginia, gives the following *strong* account of the condition of the door-yard of a place just purchased by him. "We took out of the *porch* two large two horse-loads of manure, and at least 35 loads from about the door and in the yard, consisting of ashes, night soil, old clothes, and all manner of filth imaginable. In digging, we came upon a large stove boiler buried under the accumulation of refuse." Our more thrifty readers will excuse the frequency and urgency of the appeals made in these columns to "save the manure," when told that incidents similar to the above are quite common in many districts where the *Agriculturist* is making its way. We want to "change all that."

PROPER VESSELS FOR BOILING SAP.—Sap may be kept of a light good color when boiled in iron vessels, if the kettles are cleaned frequently, and no leaves or dirt are allowed in the liquid. A large shallow pan of galvanized iron is best. Brass or copper vessels we do not like for boiling anything to be taken into the stomach. Sap, cider, and indeed almost all fruits and vegetables, contain more or less of vegetable acids, which unite with the copper, and form poisonous compounds.

A BLUNDER-BUSS.—Kissing the wrong woman.

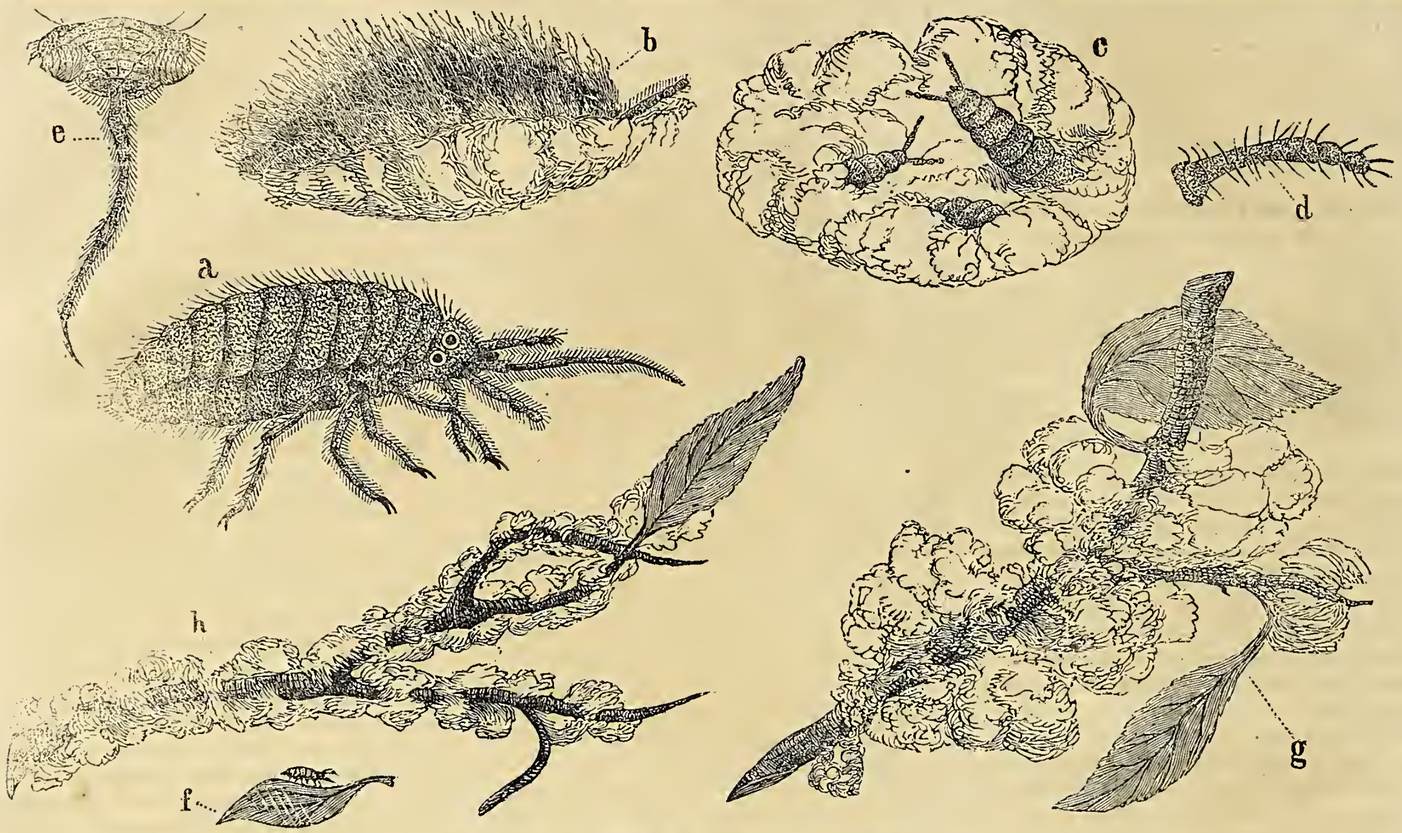


Fig. 1.—APPLE APHIS—*Eriosoma Mali.* (Highly Magnified.)

a, The large *Apple Aphis* with no covering—*b*, The *Aphis* emitting the cotton-like fiber—*c*, *Young Aphides* feeding in the nest—*d*, The *Antennæ*, or feelers—*e*, *Sucking Tube*, magnified—*f*, *Natural Size* of Aphis—*g*, Branch from Gloucester (England), covered with the *cottony fiber*—*h*, Branch found in Connecticut, covered with the cottony fiber.

Microscopic Views of the Insect World.—II.

BY MRS. CHARLOTTE TAYLOR.

Representative Aphidians—Aphis Lanigera or American Apple Blight—Poplar Aphis—Banana Aphis.—Currant and Grape Vine Aphides—Oak Aphis.

As was mentioned last month, every plant is infested by one or more varieties of Aphis. Attention is now solicited to some that threaten, by their rapid multiplication, if left unchecked, to entirely destroy our fruit. The *Aphis lanigera*, (*a*. fig. 1,) as named by Illiger, or *Eriosoma mali* by Leach, of the genus *Eriosoma*, most erroneously called the *American Apple Blight*, demands the immediate attention of every cultivator, and of every unselfish man. It is not indigenous to this country, having been found destructive in England in 1810, and in France still earlier. Twenty years ago, I searched many orchards throughout the Eastern States, and found with difficulty a single specimen. Now, every orchard here contains them, and they are traveling West and Southwest deplorably fast.

They do not thrive here as well as in England. There, when plentiful, they make the trees appear as if covered with snow, or "whitewash." The cottony substance they throw off, is not half as long in this country as in England. The warm, moist weather there, seems to be more favorable to them than our glowing, scorching sunshine and frequent long continued drouths; and myriads of them are destroyed by our Summer showers, which sometimes come down with almost tropical fury, sweeping away and drowning whole colonies at a dash. But with all these drawbacks, their increase is formidable. The illustration (*g*, fig. 1,) represents an infested branch which grew near Gloucester in England: (*h*, same fig.), is from a branch obtained in Connecticut last summer These will give an idea of their prolificness.

This Aphis generally commences its depredations as early as April. At first a hoariness may be noticed on one side of the branches of apple trees, which increases daily until the limbs are encircled. The little creatures causing this appearance, are hatched from eggs deposited in the crevices of the bark the previous Fall. They puncture the sap-wood with their strong beaks, and as they imbibe the sap, every pore, or suture of the body ejects a saccharine fluid, which hardens in the air, flakes off, and becomes a fibrous cotton-like shred, which in time entirely envelopes them. This goes on rapidly, the young coming out from this warm nest and adding to it. Among the fibers may be seen small clear globules of congealed honey dew, supplied to form the food of the young until their first change of skin, after which they puncture for themselves, and throw off cottony fiber. These globules have been mistaken for eggs, but at this season the young are brought forth alive. The fiber is greasy, sticky, and disagreeable to the touch, and is sweet as sugar to the taste at first, but becomes acid with age. If left undisturbed, they rob the tree of its sap, the bark hardens, the leaves turn yellow and fall off, the infection spreads from branch to branch, and the tree dies.

Knapp, Hausmann, and other writers, state that these insects do not become winged. I have seen their wings, but missed the insect with them on, and therefore have not given an illustration. The aphides are pale green at first, darker after the second moulting; after the third, they become dark brown, and when this skin is cast off, the wings appear. They are shorter than those of other Aphides, and more closely veined. As they approach the winged state, they cease to feed, and no longer eject the cottony fiber, but are still cov-

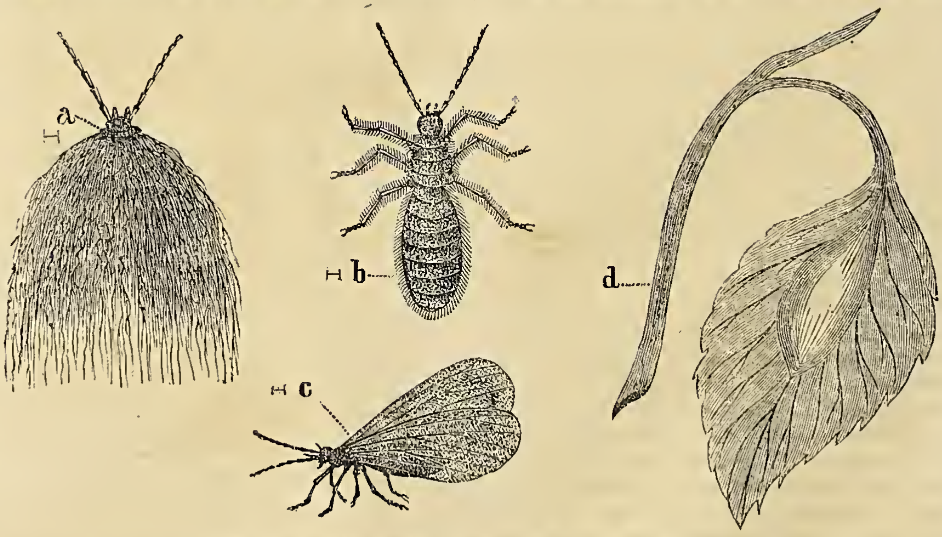


Fig. 2.—POPLAR APHIS—*Eriosoma Populi.*—(Highly Magnified.)

a, The *Aphis* as it floats in the air—*b*, The *Young Aphis* (the horizontal short line at the left shows the actual length)—*c*, The *imago*, or perfect winged insect—*d*, *Cell* or chamber of the insect on a leaf.

ered with a light white down. I had specimens successfully reared thus far, when I was unfortunately confined to my room by sickness. When I next paid them a visit, they had obtained their wings, had flown, and been speedily entrapped by a fine spider, an *Epeira fasciata*, which I had allowed to construct her nest on the branch. The web was charmingly spangled with their wings, but she had left me no specimen to reward my labors. It is only at this time they deposit eggs in the cottony envelope which is secured around them and to the branch by a yellow, glutinous fluid. Wherever this fiber is seen, the bark should be thoroughly scraped, and a piece of common yellow soap be thickly rubbed upon the branches. If any eggs remain, the young can not penetrate the soap, and they must die

Fig. 2—Poplar Aphis.

The specimen illustrated in fig. 2 is the "*Eriosoma populi*," or Aphis of the Poplar, to which tree it naturally belongs. But I have found it on the pear tree several years in succession, and it will increase as rapidly as the apple blight. It is now seen at the West and in the Middle States, more than at the East, but they are liable to be increased by every wind that blows. Small white balls of cotton are seen floating through the air.

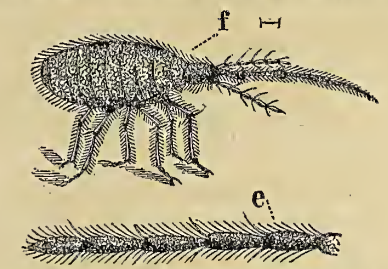


Fig. 3 —BANANA APHIS—*Aphis Sapientium.*

f, The *Aphis* magnified, the short line above shows the natural length—*e*, One of the *Antennæ*.

Catch one and open it, and you will perceive this long-legged aphis, in a soft, white mantle, emigrating to a new home. Nothing is perceptible but her long antennæ and part of her head. When safely landed upon a leaf, she perforates the middle vein; the sap exuding and coming in contact with the air, thickens, and becomes viscid, until a wall is formed, and a small chamber, as if by magic, rises around her, which she never leaves again. There she brings forth her young, who enlarge their home until their changes are completed, and they too emigrate; thus they spread rapidly. Their chamber has two outlets, one of which is usually closed to keep out the Syrphi and other insects that prey upon the Aphides. The infested leaves turn yellow and fall off, and a few years' repetition of this will kill the tree.

Fig. 3—Banana Aphis—A Caution.

The singular looking creature at *f*, fig. 3, is represented here by way of caution. It is the Aphis of the Banana. It is propagated easily on the quince, and without great care to destroy the skins and stalks of the banana, in time, another enemy will be added to our already enormous catalogue of fruit destroyers. When not sucking, it keeps its beak thrust under its body, which causes it to resemble a tail protruding from its abdomen. It is very dark and small, and is generally hid under the roughest and oldest part of the main stalk of the fruit, so as to elude observation.

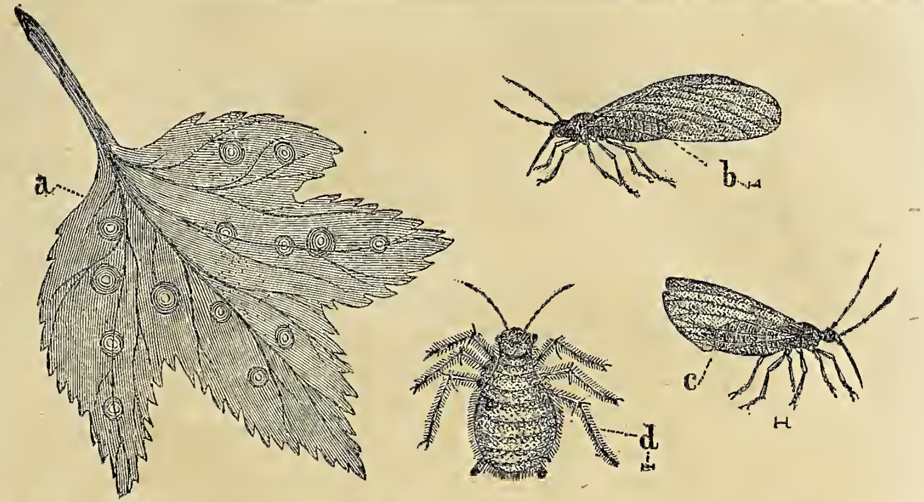


Fig. 4 —CURRANT BUSH APHIS—*Aphis Ribis.* Also the GRAPE VINE APHIS —*Aphis Vinifera.*

a, A leaf with the cells or chambers of the insects—*b*, The perfect *Currant Aphis*, (the short line under the insect shows the natural length)—*c*, The perfect *Grape vine Aphis*—*d*, Young of the *Grape vine Aphis.*

Fig. 4—Currant Aphis, and Grape-vine Aphis.

The ravages of one of the Aphis family are easily observed on the currant bush. Red and yellow protuberances appear on the leaves; turn one of these over, and they will prove to be chambers in which are closely packed hundreds of the "*Aphis ribis*" (Currant Aphis,) in every stage of growth up to the winged insect. These are shown at *a*, fig. 4. If the first infected leaf had been plucked, they could have been kept in subjection, but by their rapid increase, the bushes soon loose their green verdure, and the crop of currants is diminished at least a third, by the loss of the nourishment abstracted by these destructive little creatures.

The Aphis Vinifera, (Grape-vine Aphis), *c*, fig. 4, is equally destructive, puncturing the leaves, and causing the young grapes to harden, dry up, and turn black. Their habits and changes are the same as those of the Aphis Rosæ, (described on page 80,) except that the eggs are deposited close down in the joints of the vine. They are imperceptible without a magnifier, but can be kept under control by rubbing the joints with common hard soap in the Fall after they have disappeared.

Fig. 5—Oak Aphis.

The last one here shown, "Aphis Quercus" (Oak Aphis), *e*, fig. 5, is a singularly ugly creature, the largest I believe of known Aphides. On a large scale he would be truly terrific. You can scarcely see an oak leaf in Summer, but a dozen or more of these pigmy monsters are hard at work upon it with their strong beaks, which are used in a very curious manner. The insect crouches down on his awkward, ungainly legs, and inserts the sucker *lengthwise* into the vein instead of *down* into it. When they walk, which is seldom, they totter sluggishly along, carrying that long sucker bent under the body, giving it a resemblance to a tail. Their changes are the same as those already described. They are pale green when young, afterwards becoming deep brown, with a lighter shade on the legs and beak. They vary in color with the age and health of the tree. I have seen them dark red, and of a golden yellow hue. They are most numerous in dense woods away from the sea-board, where they make sad havoc upon the young oaks.

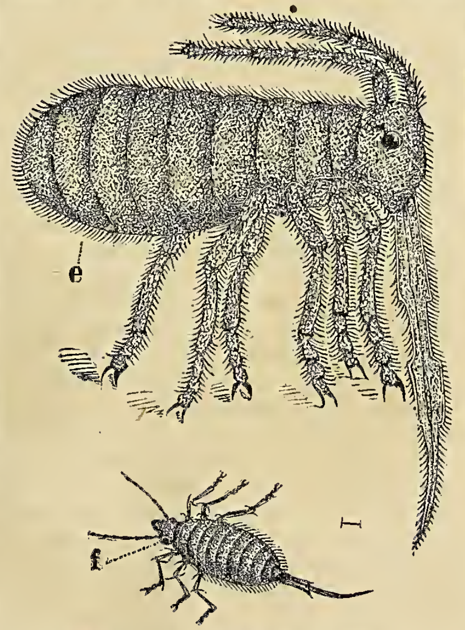


Fig. 5.—OAK APHIS—*Aphis Quercus*

e, Aphis highly magnified—*f*, The Aphis at rest with the beak under its body. (The short mark shows its natural length.)

Every tree of the forest, every bush, flower, and weed, has its life suckers always at work to keep down redundant vegetation. I have no doubt that the brilliancy and beauty of our Autumnal woods are owing, in a great measure, to these little creatures throwing out the acids from their bodies, which, coming in contact with the sap when the cold arrests its circulation, changes the green color of the leaf, and thus paints for us a scene more gorgeous than artist ever imagined.

In observing these little creatures, there is great pleasure afforded by the assurance given of the watchfulness and beneficence of a Supreme Power ever present around us. It seems impossible for one to contemplate these mere atoms, on a warm Summer's day reveling, gamboling, rolling over each other, kicking out their thread-like legs while they hang suspended in the air only by their beaks, and sprawling with delight in the sun's beams—without feeling conscious that He who made them and us, intends happiness to all.

* * *

For the American Agriculturist.

A Fight with Red Spiders.—*Acarus telarius.*

Long and determined has been the conflict. I have fought him with water thrown in fierce and copious jet, through pipe and syringe. I have battled him with brimstone, and have pursued him with solutions of whale-oil soap and nux vomica. I have applied lime and white lead in his lurking places. I have been early and late on his track. Have steamed him and submerged him in pools of water, nay I have *buried* him along with the plants which he most did love, for a week at a time, and kept the earth (his grave as I fondly hoped) saturated with water. I nearly killed the plant, but not the spider. The plant was washed clean after its resurrection and kept away from all its fellows. In about a week afterward, the flame colored wretches were feasting on the vitals of the devoted bush again, as hearty as ever

About twenty years since, I constructed a greenhouse, on the property of the Sailors' Snug Harbor, then considered the "ultima thule" of New-York. The house had not been stocked for more than a year, when the sombre and glossy leaf of the Camellia assumed the sickly hue of reddish brown. The gloss disappeared from the leaf, and beauty from the plant. It was then that hostilities commenced; the war is not yet terminated. I consulted books and floriculturists, and laid out the plan of campaign agreeably to their advice, but came off second best. Between the spider and myself, the plants—the battle ground—had but a sorry time of it, and a few years of precarious existence generally terminated their unhappy lives.

A few years since, I removed to the country, and looked forward to a glorious rest, both for myself and my plants. My stock consisted chiefly of Camellias. I had them all carefully washed, and then distributed over the grassy lawn. Now, I thought, my pets are safe from every fiery foe. One hazy, sultry, Summer morning, I took a saunter among my plants, to see how country life agreed with them. I was pleased to observe many vigorous shoots with the old gloss and healthy green upon the new-born leaves. "No spider now," I thought; "they're whipped, overthrown, exterminated!" My rejoicing, however, was of short duration. I espied some suspicious little specs, here and there. "What can they be?" was the question which naturally occurred to my mind. "Perhaps a little dirt carelessly tossed upon the foliage by romping children." Still, I will examine. They were quite still, no stir, "all right," says I. But I'll just poke the specs and imagine I am killing spiders. It will give me such pleasure as is enjoyed by the old soldier when he again recites the tale of battles he has fought. Judge of my astonishment, when the specs took life and walked off.

Since that rude awakening, I have put up large plant structures on the outskirts of the town, on a high and healthy location. My houses are stocked with a *variety* of plants, grape vines, etc. My gardener is ever busily fighting the old enemy, under my leadership, combined with his long experience in England and America, yet we can not subdue the hateful foe. Rout him out one week, the next is pretty sure to find him at his post again; pepper him with sulphur, strew it in every direction, over pipe and stage, still he survives.

And now gentlemen, editors, or contributors to the *Agriculturist*, can *you* aid me in my afflictions? Is there any better or surer method than such as those I have adopted? If so, I should most gladly learn it through your useful columns. I should gladly hear of that *deadly*, venemous remedy that would destroy the disease, yet leave the patient alive.

ENQUIRER.

Salt Marsh Sods for a Fence.

It may not be generally known along the seaboard, where wood is becoming scarce and worked stone is expensive, that sods from the marsh form a very good and durable fence, and a beautiful facing for the slopes of terraces. There are three kinds of grass found upon our salt marshes, all forming a tough sod, a foot or more in thickness. The first is a coarse sedge, found nearest the water. The second is known as "fox marsh," and is very fine and thick, and of a light green tinge. The "black marsh" is the third variety, growing on higher land, that is only flowed in the highest tides. It is a much darker and richer green than the others. This forms a sod of great strength, elasticity, and durability, and when dry, is very light and easily transported. This is the most desirable variety for fencing. The sods may be cut with a common hay knife into any desired shape or size, and laid up with as much accuracy as hewn stone.

These sods were used for building a parapet to a fort, at Gloucester, Mass., during the year 1812, and in other instances at that time. The parapet at Gloucester in 1850 remained in excellent preservation, decidedly better than rough masonry would in its place. At Fort Adams, Newport, they have been used for facing over a thousand feet of the breast-high slope of battery crest, and give promise of perfect adaptation to this purpose. Near Mystic, Conn., a battery was protected with walls of this sod, thrown up in the last war, and these walls are still remaining, unless they have been quite recently removed. These marsh turfs are frequently used for fences and cottage walls in Ireland and other parts of Europe. In the moist climate of that island it remains green, and forms walls of great beauty. The sods may be put up perpendicularly, but they are more likely to stand, when having an inclination of about one foot to three in hight. If the marsh grass does not flourish, other kinds of grass seed used for lawns, may be sown upon the terrace. If a brown wall is preferred, the sides of the sods instead of the surface should be exposed for the face of the terrace. The ease with which they are cut, and their durability, make them an excellent material for building the walls of sheds and hovels for cattle. They also form a very neat border for walks, in gardens, and are much less troublesome than common grass.

SEA SHORE.

For the American Agriculturist.

Vicious Cattle.

My neighbor Jones has a yoke of handsome grade Devons, that would be worth two hundred and fifty dollars if they were not breachy. A better pair of cattle for work can not be found in town. But he can not keep them in any pasture upon his farm, though his fences are much better than the average of our farmers. Last Summer, they tore down a seven rail fence, and got into his rye, just before it was ready for cutting, and destroyed ten dollars' worth of grain in a single night. He found them so uncontrollable in the pasture, that he had to put them in the stable for the rest of the season. He could not sell those oxen for a hundred and fifty dollars to any man who knew their character for jumping. This vicious propensity costs him at least a hundred dollars, to say nothing of the crops they destroy when they get a chance.

And this trick is altogether a result of education, as much as lying or stealing is in a boy. He bought them of a man who was too lazy to put up his fences in the Spring, and uniformly has that job to attend to all through the season. Sometimes the cattle were in the oats, sometimes in the clover, and again in the corn. Of course, they had to be driven out, and the gap was temporarily stopped.

This vice of jumping, and throwing down fence, is, almost without exception, taught to cattle when they are young, by careless and lazy owners. Neglected fences are soon thrown down as the cattle rub against them, without any design on their part. They can not be blamed for their rubbing against every fence corner, for it is their nature. If the fence falls, it is their first lesson, and they walk over triumphantly into the better feed in the next lot. Any animal of good sense puts the rubbing and the good bite together, and the next tempting feed over a poor fence creates a great itching of the skin, and suggests rubbing as the fence falls, and this is the second lesson. If the boys are too lazy to let down all the bars so that the animals are compelled to jump over, they have a third lesson. This is generally enough to complete the education; but if the farmer gets desperate and puts on an additional rail every time they make a breach in the fence, the ambition of the animal generally rises with the hight of the fence, and he becomes an accomplished vaulter, that no fences can restrain. When once the lesson is taught, it becomes a permanent characteristic, and lowers the value of the animal for all purposes except beef. It is worth while to bear this in mind at this season, when fences are repaired. The pastures especially, that are designed for young cattle should be thoroughly secured. The want of a half day's work in the right spot, may be hundreds of dollars damage to the young herd.

CONNECTICUT.

An Experienced Butter Maker's Method.

To the Editor of the American Agriculturist:

My experience for many years in a large dairy gives me some practical knowledge of what constitutes a good article of butter, and perhaps I can not better explain the principle of making it, than by giving the regular method pursued by my family. In the Spring, when our cows are coming in, we keep them entirely from the horse litter or stable, which would give the milk an unpleasant flavor, and feed them a little yellow corn, carrots or cornstalks, which improve the color and quality of the butter. We are very careful to strip the cows as clean as possible, and strain the milk in the cellar before it cools, in order that the cream may rise undisturbed. We use twelve-quart tin pails instead of pans, finding them more convenient. If the weather is freezing cold, we add about one teacupful of buttermilk to each pail, strain it full, and let it stand until the cream rises; then take enough for a churning to an upper room where fire is kept most of the time, and let it become loppered, at which time it is ready for the churn. We put about 24 gallons of milk in a 60 gallon churn, and in churning, have the dash rise above the milk, and descend to the bottom of the churn, otherwise there is a deficiency in churning all the milk effectually. We use no thermometer, but suppose the milk to be at about 60° or 65°, (Fahrenheit). We can tell by the sound if the milk is tempered right, it will have a clear ring. We use horse power, and churn from 60 to 80 minutes. When the churning is nearly done, (which is told by the butter rising in separate specks upon the dash). we put in about 5 gallons of water, continue to churn a few minutes longer, when the butter is ready to be taken out. It is then washed in 2 or 3 different waters, salted, and put away to stand about two hours, for the salt to dissolve. It is then worked a few minutes at a time, several times during the day. When the brine becomes clear it is packed in tubs holding about 40 lbs., and sent to the city. This is our method of making butter until about the middle of May.

The means used to secure the thickening of the milk (loppering), depend on the weather. When it is mild, we strain the pails half full in the morning, and then fill them at night with warm milk. Again, if the weather is still warmer, we fill the pails full. Buttermilk is used only in cold weather. If a stove can be used in the cellar, it is preferable to any other mode for thickening milk.

About the middle of May, our cows are generally all in, and we commence the Summer dairy

We have about 50 cows, and from 5 to 7 persons who do the milking, and one who attends to straining the milk as fast as brought to the milk-bench adjoining the yard. Usually about 9 quarts are strained in each pail. If, however, the weather is cool, more is added, if warm, less. Our cellar is kept quite dark, and free from any current of air. We think too much light bleaches the cream, and too much air dries its surface. When the weather becomes warm, ice is used to cool the butter fit for working, which is quite necessary, as it is hardly possible to work soft butter to any advantage. We are quite careful when using the ladle, not to draw it over the surface of the butter, but to extract the buttermilk by gashing and pressing. We think the drawing of the ladle on the butter, creates an oily surface, and changes its solidity, which causes it to become rancid. Ashton salt is used, about one ounce to the pound of butter, yet we have discovered a remarkable difference in what is called Ashton salt, some dissolving easily, some otherwise—I have sometimes thought that Ashton sacks were filled with Salina salt. Our firkins are filled with water, and soaked about 24 hours before packing in them. When filled within an inch of the top, we spread a clean cloth on it and put on half an inch or more of salt, then make a brine so strong that no more salt will dissolve in it, and pour the firkin full. We think brine can not be made strong enough to prevent the top of the butter from changing its color and becoming rather light upon the surface, but salt and brine united, will keep the butter without change.

CHEMUNG COUNTY.

Cultivation of the Sweet Potato.

In a fine engraving, in our sanctum, we have at least a half bushel of this esculent spread upon a rustic table, and General Marion is inviting a British officer to dine with him. Sambo has just taken them from the glowing coals, and from appearances, sweet potatoes roasted, will constitute all the courses of the sumptuous repast. It is a universal crop of the South, growing as luxuriantly in the tobacco fields of Virginia, and in the cotton fields of the Carolinas, as upon the fat sugar lands of Louisiana and Texas. It is found in almost every mansion and cabin south of the Potomac, and in later years it is invading the North, and can be cultivated economically in the latitude of this city, and as a garden product in every State of the Union. It is a highly nutritious and palatable vegetable, and though less in aggregate value than several other crops, it would be missed as greatly as any crop in the country.

The sweet potato is said to be a native of the South, and the facility with which it is grown in almost all soils, and under all circumstances, favors this supposition. All around the Mexican Gulf it lives in the ground without protection through the winter, and the article is to be seen in the New-Orleans market in the greatest abundance throughout the year. The cultivation in the Southern States is generally of the most careless kind, without manure, and with much less tillage than is bestowed upon cotton, corn, or tobacco. It is not a crop relied upon for sale, and is therefore apt to be neglected. Yet under this chance cultivation the yield is generous, and a large supply of food for man and beast, is produced with very little labor. In the cotton and sugar regions, the aim of the planter is to produce just enough for home consumption. It is only in the vicinity of cities and seaports, that they are grown for the northern market to any considerable extent. The last census shows a total product of thirty-eight millions of bushels of sweet potatoes for the whole country. With a larger market, the crop might be easily increased to any desirable extent.

THE PRESERVATION OF SEED.—During the winter this is one of the greatest difficulties northern cultivators have to contend with. In the South it is easily managed. A clump or stack is made of them out of doors, very much as an English farmer would stack up his turnips. Any convenient place is selected in the garden, or in some enclosure to keep off cattle, and hogs. If the spot is sandy or otherwise well drained, it is all the better. A platform is raised about a foot high, of earth, or boards, as may be convenient. Upon this the pile of tubers is heaped in the shape of a cone, or pyramid, as suits the fancy of the overseer. When this is raised four or five feet high, it is covered with boards, or thatched with straw, or pine leaves, or any convenient litter, and then covered with dirt a few inches in thickness. A small hole in the top gives ventilation. The more careful planters construct a rude shed or hovel over the heaps to keep off the rain.

But in our cold climate, where the frosts of November spoil every unprotected tuber, it requires considerable skill to carry them through the winter. The seed usually selected, is the small refuse tubers that are not fit for market, a half inch in diameter and less. The desideratum is a uniform low temperature, say between forty and fifty degrees, and perfect dryness. A common method is to pack them in chaff or very dry saw dust, and keep them in the kitchen, or where a fire is kept up all the while.—We once packed them in a mixture of dry plaster and wheat chaff, and put them in a chamber warmed by the kitchen stove. The plaster absorbed any decaying spots, and about three-fourths of the quantity put in, came out sound. We have also packed them in dry coal ashes, and kept them in the furnace room in the cellar. These kept very well. It is a matter of a good deal of importance, that the tubers should be fresh dug and unbruised, when they are packed away for the winter.

TO GET SETS FOR PLANTING.—In the South the potatoes may be planted in the hill, like our Irish potatoes. But with us they would either rot under this treatment, or come forward quite too late to make a crop. If only a few hills are wanted, the seed may be put in a small box in the kitchen window, or any other convenient warm place. A box two feet square will start a large number of sets. [Last year we raised a fine lot of sweet potatoes from plants obtained at a small cost from a green-house; and when such plants are easily obtained, it is cheaper to buy than to raise them, if only a hundred or so are wanted.]

But if they are to be grown on a larger scale, a hot-bed should be prepared for them, from the middle to the last of April, according to latitude. The edges of the bed may be made with any convenient rough boards, say four feet in width, fifteen inches in depth, and long enough to hold the desired quantity of potatoes. Fill up the inclosed space with horse-manure in a fermenting state, and tread down to about ten inches in thickness, and cover with three inches of sandy loam. If sand is not in the garden loam in good quantity, it should be added, as it is a great protection against the rotting of the potatoes. After this is raked over, and all the fine lumps broken, put on the tubers in rows about an inch apart, and cover with two inches of sandy loam. The hot-bed may be covered with glass, or with fine straw, as suits the circumstances of the farmer. If the latter, the litter should be very fine, and about six inches in thickness, and if rains come on, boards should be laid over to keep the litter dry.

The bed should be examined daily by uncovering a small place and thrusting in the hand to see if the temperature is too high. The object is to keep up a gentle heat that will promote vegetation. If too warm, uncover during the day, and cover up again at night. In about two weeks the bed, if properly managed, will begin to give signs of the shooting plants. But this kind of protection is much more difficult to manage than glass, and every cultivator who lives within reach of a carpenter, should have sashes for his hot-bed. There is much less danger of overheating, and the direct rays of the sun hasten the sprouting of the plants. When the shoots are up three or four inches high, they are ready to transplant.

THE PREPARATION OF THE SOIL.—However this crop may flourish upon its native soil with little attention, it will not pay at the North, unless it have extra manure and cultivation. The most favorable soil is a sandy loam, the sand largely predominating, with a good southern exposure. After thorough plowing and manuring broadcast with an abundant supply of yard compost, the rows should be marked off four feet apart, and the hills be formed three to four feet asunder. The hills should be raised about a foot high, with a shovelful of cow manure in the middle. The most of this work of hilling can be done with the plow, by ridging the land, and then cutting the ridges at right angles. Old cultivators recommend the manure of neat stock as a specific fertilizer for this crop.

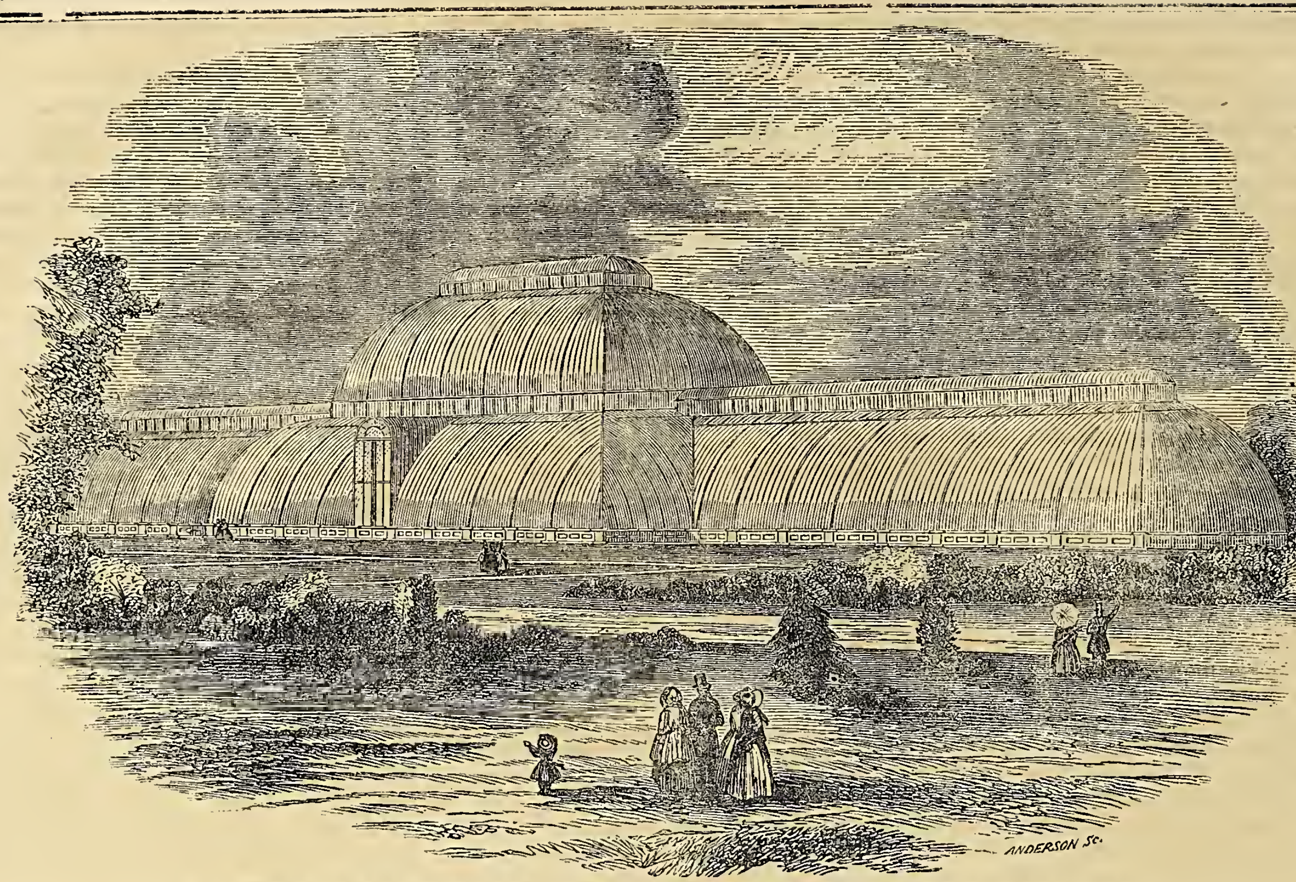
TRANSPLANTING.—The young plants may be removed from the tuber by the thumb nail, without disturbing it in the bed. A succession of young plants may be taken at intervals of about a week, so long as they are wanted for planting. The plants are hardy, and about as likely to live as cabbage plants after the third week in May. As a rule, they will grow when corn will.

AFTER TREATMENT.—In hoeing, draw the dirt up toward the plant until the hill is eighteen inches to two feet high. This gives them the full benefit of the air and sun during the Summer As the vines commence running, they should be examined once in two weeks, to see that they do not strike roots at the joints. If left undisturbed, they begin to form tubers, and draw away nourishment from those in the hill. The vines are rampant growers, and, in congenial soil and climate, will cover the whole ground.

GATHERING THE CROP.—This will depend somewhat upon location. As a rule they will grow until the frost kills the vines, and they should be gathered immediately after the first frost. If suffered to remain after this, the delicate flavor of the potato is injured. They should be housed immediately, and kept in a cool dry place until they are consumed.

As a garden vegetable, in places remote from seaports, we think it will pay to raise the sweet potato. The flavor is not, perhaps, quite equal to that of the Southern grown article, though, as this is a matter of taste, there would be a difference of opinion. If well cooked, we will warrant that no housekeeper will find them a drug upon the table. The vine is one of the most beautiful of all trailing plants, and might worthily have a place in the flower border.

TO REPEL INSECTS.—An English journal says that leaves of the common Elder bush scattered among cucumber and melon vines, will keep off the bugs which infest them. Has any one in this country tried it? And if so, with what success?


ANDERSON Sc.

THE GREAT PALM-HOUSE AND CONSERVATORY AT KEW GARDENS.

Visit to the Royal Gardens at Kew.

"Where and what are these gardens? Tell us about them; it's just the talk for this weather."

Well, they are public botanic gardens at Kew, a village on the river Thames, 7 miles from London, England. They are maintained by the government, and contain the finest collection of plants in the world. Within the premises are a series of ornamental buildings, in classic and Chinese styles, many of which were erected by Sir Wm. Chambers, about the year 1760; here, also, are all the known trees, shrubs, and plants of the globe, which will grow out of doors in that climate, and for those too tender, glass houses of great hight and extent have been built. They also contain ponds for fish and water-fowl, with a well arranged Geographical and Natural Museum. All these things are not collected and maintained for private gratification; they are open to the well behaving public, and as Dr. Lindley observes, "are designed chiefly to promote the advancement of science and the arts, of medicine, commerce, agriculture, horticulture, and various branches of manufactures." The government employs plant collectors in every part of the world, who send home roots, seeds, and specimens of woods and plants. This garden is but a huge Encyclopædia, printed with facts, instead of words!

Now, let us go in, and take a hasty look: our time is very short. What a magnificent entrance-way! These pillars and gates of iron are grand enough for a royal residence. Look here to the left, you conifer-loving man, walk through the old Arboretum. See this Cedar of Lebanon, its gigantic branches cover full 200 feet of ground. Yonder are some of the newer evergreens. This Deodar cedar is one of the finest. Here are some Araucarias in tubs, out for a Summer airing: it's a pity they are not hardy; and so of these Himalayan and Douglas' spruces. But here are some robust fellows, the Corsican pine, the Austrian and Bhotan pines, and the *Pinus pumilio*, of Carniola, sprawling and odd. That Scrub pine, there, reminds you of Yankee land! Here are Turkey oaks, the Oriental Plane tree, and Cork tree.

Let us push on to the Temple of the Sun. As we pass this old Cedar of Lebanon by its side, hear what Sir Wm. Hooker, our guide, says: "There are more Lebanon Cedars now in England, than in all the Lebanon mountains put together." Here is the Architectural Conservatory, and yonder (see picture) is the great *Palm-House*, looking like a gigantic bubble. A miniature lake has been formed on one side of the building. The house is entirely of glass, set in iron, brick, and stone. It has a central hall and two wings: the center 100 feet wide, and 66 feet high, the wings 50 feet wide and 30 feet high. It requires 12 furnaces to warm its boilers in Winter; in Summer four keep things going. The hot water pipes coiled about it, are five miles long! The whole building, we believe, cost about $200,000.

But here, before we go in, let us look at this specimen of ribbon-gardening, or "living tapestry," as somebody calls it. The yellow consists of calceolarias, the pink and scarlet of dwarf geraniums, the blue of campanulas and alyssum, the lavender of ageratum Mexicanum; the border is fringed with verbenas of various colors. —worsted work for ladies to beat, if they can!

Now, take a peep into this Glass-House. Here, just inside the door, are both the black and green Tea shrubs, from each of which, they say, the Chinese contrive to make either kind at pleasure. Accommodating fellows! Yonder, is an old tree-pæony, remarkable only for being the original plant brought from China by Sir Joseph Banks, and is, therefore, the great or great-great-grandmother of most of the tree-pæonies in the western world. Off with your hats, and down on your knees, ye nurserymen, for this plant has been the means of lining your pockets with many a dollar! Push on. What's this? A plant in motion! the *Desmodium girans*, or moving-plant, which, from no perceptible cause, twists and twitches two of its leaflets night and day without cessation. And there, under a glass, is the American Fly-trap. As soon as an insect lights upon the green bristle of the leaf, the two lobes close upon him, and hold him till he dies; then they open, and wait for another victim. It is said that there were gigantic plants once on this globe: what, if there were also fly traps big enough to catch a man! Notice this Caricature plant: the leaves green, but marked with yellow blotches, making an outline of the human face divine—more or less! Here is one, says Dr. Hooker, like Lord Brougham, and there is one said to resemble Mrs. Caudle. Where's Mrs. Partington? Go on, now. Here we have the queen of plants, the Victoria regia lily, swimming in a tank alone, the water kept as warm as that of a tropical river.

INSIDE OF THE PALM-HOUSE.

But another look at the great Palm-House, for growing trees and plants, mostly of the palm tribe. Well is it called "the glory of Kew Garden." One can here get some little idea of a tropical forest. From among these fern leaves a tiger might very naturally rush out; huge serpents might climb these cocoa-nut palms. Here are banana trees with fruit hanging on them in abundance; and the vegetable Ivory palm, whose nuts are molded into so many ornamental objects; and the Elephant's Foot, from South Africa, a tree whose gigantic root-stock resembles an elephant's foot. There is the Mango tree, with its fruit on the end of a long stalk; and there is the Chocolate tree, with flowers on the thickest part of its woody trunk.

Now we come to a section where the motto must be, "Touch not, taste not, handle not." That plant, over there on a high shelf, is the "Dumb Cane," which palsies the lips and tongue of those who taste it. A few years ago another very poisonous plant, the *Jatropha urens*, stood here, but has since been killed, on account of the many accidents happening from it. Now, ascend this spiral stair case, and look down, thirty feet or more, upon the ferns and palms, these princes of the vegetable kingdom. Tropical creepers clamber about the iron pillars and ornamental work of the stairway, covering it to the very top; among which, note especially the *Aristolochia*, from South America, whose huge flowers the children there often wear as bonnets!

Now, enter the Museum, the particular hobby of the learned Director. The Guide-book informs us that this "is designed to receive all kinds of fruits and seeds, gums, tannins, resins, dye-stuffs, starches, oils, textile fabrics, sections of woods, materials for basket-work, all straws and grasses, and all curious vegetable products, especially those which are useful in the arts, in medicine, and in domestic economy." Another authority adds: "it is designed to receive whatever is serviceable to the botanist, merchant, manufacturer, chemist, druggist, carpenter, cabinet maker, and artisans of every description."

Here, we see the fruit of the cannon-ball tree, from Guiana, which are odd looking globes, used more for drinking-cups than for warlike purposes. Near by is the Towel-gourd, from the tropics, used both as wadding for guns, and as a sponge. There, is a native shoe-blacking, a flower which when crushed, is used by the Chinese to polish their shoes. This is a bottle of milk from the cow-tree of Venzuela. Wonder if it is sweet? That Sacred Bean, of the Egyptians, looks in its dried state, says one, like a circular piece of over-baked pudding, stuck full of hazel nuts! Here we have the fruit and bark of the famous Upas-tree, fabulously called poisonous.

Over yonder, are candle-wicks from China, made out of the pith of a plant; and near it are seeds of the Chinese tallow-plant, with candles manufactured from it. Here we come to the "Old Man's Eye-brow-tea," done up in bundles; this sort does not reach the American market.

Further on, are dried specimens of some *extreme* plants, such as the *Rhododendron nivale*, the most alpine shrub in the world. Then, just outside of this glass-house, you will see the most southern tree, viz.: the Evergreen beech, from Terra del Fuego. Dr Hooker here turns to tell us that this beech as growing in a warm, sheltered valley, is large enough to make canoes out of the trunk, while the same on the exposed hights of Hermit island become so dwarfed and stunted, and compact, that the traveler is able literally to walk on the tops of them! These trees suffer more from the heat of England, than the Winter's wet and cold. Now we come to something familiar to Yankee eyes; specimens of Sugar maple wood, with little cakes of maple sugar, looking like bar-soap. And hard by, are American clothes-pins, made from the same wood!

Just here, the eyes of our director began to twinkle, and he went on to say that he once sent a basket of Osage Oranges to the Queen, as a curiosity. The Queen, on visiting Kew not long after, tapped him with her fan, and rallied him for sending her such hard and indigestible fruit for the table! "Why, the servant cut one and handed it to me, but sir, it was really uneatable!" As the Osage Orange does not ripen in the English climate, her ignorance was excusable.

Push on; we have no time to waste. Here is the bulrush, from Egypt, the same sort as the basket was made of for the infant Moses. Those are specimens of woods injured by insects and bad pruning. Here, are beautiful models in wax, of fruits. flowers, gourds, etc., including the *Jaca*, or Jack, the largest known eatable fruit, and the *Rafflesia Arnoldi*, the largest known flower. There is wood from the Gutta Percha tree, and a bottle of its juice, also several articles made from it. This is a specimen of the Monkey-pot family. The lidless capsule is used for catching monkeys. Sugar is put on the outer edge of the flower, which enlarges inside, and when the animal has put on his paw to get the sugar, it is drawn in and he can't get it out, and the huge plant so clogs him that he is easily captured. Over yonder is the American Poke-Weed, which the Europeans raise on purpose to color their *artificial* wines a fine red, to please American eyes!

* * *

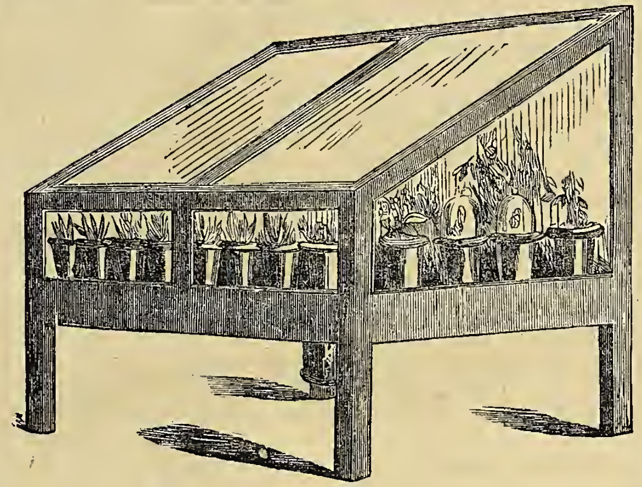


Fig. 1.

Waltonian Cases for Propagating or Starting Plants, Seeds, etc.

Any one at all experienced in striking cuttings, knows the beneficial effects of a well-regulated bottom heat to make them push out roots freely. A few trees and shrubs, such as the willow, currant, grape, etc., will root with tolerable success when planted in a mellow, natural soil; but with the more difficult roses, camellias, weigelias, fuchsias, and many common plants, more care and a bottom heat are beneficial if not absolutely required. A gentle hot-bed is often made for the purpose, and frequently answers very well, although quite inferior to the cases now referred to.

The Waltonian cases are named after Mr. Walton, an English horticulturist of some note, who first constructed them. They are not intended as permanent cases in which to grow plants, being used only to *start* cuttings and seeds. They are so easy of construction that any carpenter can make one at little cost, and the artificial heat is kept up at trifling expense. The frame is of wood, which may be of common material when intended for a green-house, or of fine wood, varnished or painted, if to stand in the drawing-room or library. The sides, ends, and top, are of glass. As they are heated by a burning lamp, it is not advisable to make them of large size, but to construct two or three, or more, if considerable propagating space is desired.

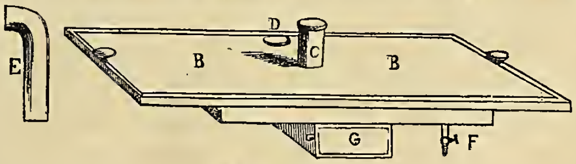


Fig. 2.

The case from which our engravings are taken, is three feet long and eighteen inches in width, with an inside hight of ten inches in front, and fourteen inches at the back. We should prefer one, four feet in length, two feet in width, twelve inches high in front, and eighteen inches at the back, using two lamps if one be not sufficient. The bottom of the frame may stand on legs about one foot above the floor.

In fig. 2, *B*, *B*, is the bottom shelf made of zinc, in the form of a box, about one inch in depth. This inside space is kept filled with moist sand. On the under side of the shelf is the square boiler, also made of zinc, about two inches deep, with a tube, *C*, projecting up through the shelf, by which the boiler is filled. It is also fitted with a cap so as to retain or emit the steam as may be desired. Beneath this water tank is seen the fire-box or lantern, made of perforated zinc to admit air, and having a glass sliding door, *G*, through which to observe whether the lamp is burning or not. The fire-box, or furnace as we may call it, opens into the shelf at *D*, to which is attached the flue *E*. This passes out at the side, or is carried through the sash at the top of the frame. Having everything prepared, raise the upper sashes upon their hinges, fill the boiler with *warm* water, set in the pots of prepared cuttings, or seeds, let down the sash and light the lamp, or lamps, under the boiler, and the only further care necessary is to keep the boiler and lamp filled, moistening the sand in the bottom board or tray occasionally. The water can be drawn from the boiler at any time by means of the faucet *F*, and when it needs replenishing, warm water should be used. By hanging a thermometer inside of the case, the temperature can be observed at any time, and regulated by increasing or diminishing the flame of the lamp. From 75° to 80° Fahrenheit, is the most desirable temperature. A vapor bath can be given, by removing the cap from the tube *C*. Of course it will be necessary to raise the sashes and admit fresh air occasionally, especially when hardening off the plants for transplanting out. The pots can be taken out, examined, and the plants watered whenever needful.

* * *

Raising the Locust from Seed.

In response to the inquiries of Ezra S. Berckley, Somerset Co., Pa., and others, we answer: For the best success, gather the seed as soon as ripe, and place immediately in boxes of earth until early Spring, or sow at once in the ground. A portion will usually grow the first season, and more the second, if left undisturbed. Take a hint from nature, and only cover half an inch o so deep, using black earth or scrapings from the woods. Seed may also be obtained at all times from seed dealers, and a considerable portion will usually grow, but not always. As above stated, a portion, and sometimes all of the seed will remain in the ground, and start up the following Spring. Perhaps the better plan, in ordinary cases, is to plant the seed as soon as ripe, but where it is desired, Spring planting may be adopted. Locust trees may be transplanted from the forest or nursery, like other trees. They delight most in a rich, moist, but not wet soil.

* * *

Grape Vines from Cuttings.

If any one has not a hot-bed to propagate vines from single eyes, we would advise him to try cuttings. Choose well ripened wood, and cut it into pieces with three buds on each. Two buds are set below the surface, so that if one of them fails to emit roots, the other may do so. Prepare a good, well spaded patch of ground, make trenches a foot deep, by drawing a garden-line from one side of the patch to the other; sprinkle an inch or more of sand at the bottom of the trenches, and then lay in the cuttings obliquely, and fill up with good soil. The sand will facilitate the formation of roots. The cuttings should be set so deep as to leave not more than an inch with one bud above ground. If the Summer proves to be a dry one, the ground should be watered and also be mulched around the vines.

THE TAYLOR GRAPE.—What has become of it? We heard certain good judges speak highly of this grape last Fall, but of late nothing is said about it. It hailed from Cleveland, Ohio, was declared to be an undoubted native, perfectly hardy, and of surpassing excellence. Mr. Thomas Meehan, of Germantown, affirmed it to be "decidedly *the best* native grape of some seventy kinds which he had tasted last year, (1859.) The leading members of the Philadelphia Horticultural Society held the same opinion." A grape which promises to stand by the side of the Delaware and Rebecca, should be looked after.

Even a Boy can make a Hot-Bed.

Most people have an idea that a hot-bed is so difficult of construction as to be beyond their own skill or circumstances. But this is altogether a mistake. A hot-bed is within the reach of every one who can get a few bushels of yard manure, and some rough boards. In its simplest form, a hot-bed consists of nothing more than a foot or two in depth of fermenting yard manure, covered over with half a foot of good soil upon which to sow seeds, or set out plants. Usually there is to be placed around and over this, some sort of covering to retain the heat produced within, and shut out cold. The general custom is to make the box with boards, and cover it with sash set slanting towards the South. The covering may be of cloth instead of glass. C. B. Higgins, a youth of sixteen, living in Delaware, writes to the *Agriculturist* as follows: Having read the description in Vol. XVIII, page 83, (March No., 1859,) I determined to try to make one. I built a board frame six feet long and four feet wide, and stretched cotton cloth upon it, brushed a good coat of oil upon it, and let it dry until it was hard and firm. I then made a large box, without any bottom, set it over a pile of manure two and a half feet thick, and covered it with the oil-cloth shade. In less than forty eight hours it began to ferment. I then placed on the manure a covering of rich loam six inches thick, in which I sowed my seeds. They sprang up readily, and grew as finely as if covered with glass. I planted cucumbers in small pieces of sod set in the bed, which grew rapidly, and were afterwards transplanted out, so that we had them much earlier than usual. When by such a simple contrivance as this, garden vegetables can be had from four to six weeks earlier than by planting in the open ground, it is worth a trial.

Raising Figs.

"A Boy Subscriber" in Crawford Co., Pa., writes to the *American Agriculturist:* "A neighbor of ours in eating some purchased figs three years since, saved and planted the seeds. They sprouted, and he presented me with one of the trees. It has grown well, but it has not borne any fruit. What shall I do to make it bear?"

Answer.—Your tree is scarcely old enough yet. You would not expect apples the third year from seeds. The fig, like the lemon, and orange tree, is brought into bearing earlier by grafting or budding from another tree already yielding fruit. By obtaining from a nurseryman a single fig tree of an improved variety, you can easily multiply it by grafting upon seedlings, or by cuttings and layers. As the fig tree is not hardy, it should be bent over in Autumn, and covered with earth during the winter. It will then grow more thrifty, and be more likely to produce fruit.

Plant the Maple.

It is surprising that so little value is set upon the maple. For fire-wood it ranks high, and it is considered a good shade-tree; but it is not prized according to its merits. It possesses almost every conceivable quality of a good tree. It transplants easily, grows with rapidity, and thrives in almost any soil or situation. Its leaves push out quite early in the Spring; they are clean and bright during the Summer, making a very dense mass of foliage; and in Autumn their rainbow-tints are surpassingly beautiful. Some fastidious tree critics tell us that the outline of the body of the foliage is somewhat too regular and stiff; but if so, the many other excellences of the tree atone for this defect. We need not plant maples exclusively. The streets of a town should be set with a variety of trees. Some should be arched over with the graceful elm; others should have the ash, others the oak, the linden, the horse-chestnut; but not a few should be adorned with this standard tree. It would be an excellent arrangement to plant a long avenue with the different kinds of maple—the scarlet, the silver-leaved, the rock, and the black—interchangeably, and with frequent specimens of the white ash intermingled. The effect, all Summer long, would be varied and pleasant, and in the Fall, the scene would be as gay as fairy-land.

So much for beauty; now a word for use. On most farms, the maples were swept down at the original clearing of the land, as ruthlessly as the beech, elm and hickory—not so much for the fire-wood and lumber, as for the ashes and the land. The first settlers seem to have thought only of their present wants. Forests were an abomination, and down went sugar-maples and all; so that now, the land owners have to buy foreign sugar and molasses at double the prices the same amount of "sweetening" would have cost from the maple, if the original trees had been left standing.

Why would it not be a good investment to set apart two or three acres of land on every farm of considerable size, expressly for a sugar orchard? Set the trees about ten feet apart in rows ten feet asunder. This would give 435 trees to the acre, or about 1,300 to the three acres. When they have grown to a foot in diameter, they will each yield two pounds of sugar a season, making nearly half a tun to the acre. These trees will not materially injure the land for pasturage. A grove planted so compactly, would much facilitate the labor of gathering the sap. If such an orchard did not yield large returns of sugar to the planter himself, it would enhance the value of the land every year, and would be of great service to his children.

Of the usefulness of the maple as lumber, we need hardly speak. Every one knows what fine cabinet-work it makes, such as chairs, bedsteads, etc., and how valuable it is for fuel.

In addition to the native species of maple above mentioned, there are two or three foreign varieties worthy the attention of planters. One is the English maple (*Acer campestre*). South of Albany, it is perfectly hardy. It reaches about thirty feet in hight. Its leaves resemble those of the gooseberry. It makes a broad, spreading head. This was a favorite of the late Mr. Downing.

Another species is the Norway maple (*Acer platanoides*). It resembles the sugar maple, but has a more rugged and branching habit. Its leaves are larger and darker. It is hardy at the extreme north, and is worthy of the notice of all planters. Mr. Meehan, in his "Hand book," says: "It is quite a peculiar tree, combining the artistic appearance of some trees with the rusticity of others. There are many situations in a landscape where it would be singularly effective."

Another is the Ash-leaved maple (*A. Negundo*). This is often found indigenous in the Middle and Southern States. It is a fine tree, but not equal to those already mentioned. It very much resembles an ash.

NEW VARIEGATED-LEAVED TREE.—Foreign journals speak of a new variety of the *maple*, styled *Acer negundo variegata*, which has lately been introduced to the market. It is said to resemble the ash-leaved maple of our own plantations, except that the leaves are strikingly variegated. It is reported to be as hardy as any of the maples.

"That Wonderful Tree in Oregon."

[The following communication from P. Ritz, a subscriber in Oregon, is in response to inquiries made under the above heading in the *Agriculturist*, Vol. XVIII, page 305 (Oct. No.) Specimens of the bark, leaves, and seeds of the tree were forwarded; the latter are under trial for propagation. We shall be happy to record the success in this locality, of a tree of such promise.—ED.]

To the Editor of the American Agriculturist.

In relation to that "Wonderful Tree in Oregon," you have been slightly misinformed. Instead of its being confined to one particular place, I have seen it in every county in Oregon, and in several places in Washington Territory. Within the last few days, I have seen trees of this species 50 feet high, and large enough to make nearly two cords of wood. It is a very pretty, close grained, yellow wood, and makes good furniture, or a good fire.

In regard to its general appearance you stated correctly, except that its leaves are not fragrant. You had doubtless confounded it with an evergreen, fragrant shrub, leaves and seed of which I also enclose with this.

We call the first mentioned tree the Laurel, and it is certainly the most beautiful ornamental tree I ever saw. Its bark is as smooth as polished mahogany, and of a pretty pale red color. It is an evergreen with thick, leathery leaves somewhat like the pear, has clusters of small white flowers in the Spring, that produce clusters of scarlet berries the size of a small cherry, which are rather pleasant to the taste, and may be eaten with impunity, as I have proved. They are quite palatable to the poor half-starved emigrant who can get nothing to eat but boiled wheat and smoked salmon. I have not noticed trees in bloom, or yielding fruit, under 10 to 12 years old.

Last season I received $600 worth of shrubbery from New-York, and out of the whole lot there was nothing so pretty as this native tree

The fragrant shrub alluded to, grows 6 to 9 feet in hight, with thick, dark green leaves, so full of resin that they are quite sticky to the touch, and impart an agreeable odor to the hands, when rubbed with them.

Cranberry Culture.

There is a healthful agitation upon this topic all through the northern and eastern States. Fungus as he discusses his roast turkey and trimmings, in his magnificent dining room on Fifth Avenue, wonders at the small dish of cranberry sauce that modestly stands sentinel to his favorite bird. "Have diminutive side dishes come again into fashion, my dear? Havn't had sauce enough at any dinner this Winter."

"Cranberries, my dear, if you must know," responds Mrs. Fungus, "are six dollars a bushel, and not always to be had even at that. If we are able to have them every day, there are many respectable people who are not, and it becomes us to set them a good example in household economy."—"Go to grass with your economy, please, and enlarge the size of the sauce dishes."

Merryweather, the carpenter, has not seen the dish upon his table this season, and wonders if the turkeys ate up all the berries before they were sent to market. Jones, the farmer, raised a fine lot of them, but the price was so high, that he could not afford to keep even a peck for his family, and not a cranberry has gladdened his eyes since the Thanksgiving turkey sent up its incense upon his table.

"Cranberry sauce, wife! you might as well make a stew of gold dust, and have done with it."

An article coming so near to the almighty dollar as this, is well calculated to stir the blood of all Yankees, and for their benefit, we purpose to throw out a few hints appropriate to these cranberry fever times. This fever, however, is not of the Multicaulis, or Dioscorea type. There is no *princely* monopoly of the vines, and they are not advertised at twelve dollars the dozen, warranted to be of immaculate purity, and imperial excellence. It has a solid basis in innumerable swamps well stocked with myriad plants, which are to be had in any desirable quantity for a mere song.

Varieties of the Cranberry.—There are three distinct species of this fruit, the high bush cranberry (*Viburnum opulus*) which belongs to a different genus of plants, and is no cranberry at all. The (*Oxycoccus Palustris*) or European cranberry, and the *Oxycoccus Macrocarpus*) or American cranberry. This last is native to our continent, and is the article usually found in our markets. Forty years ago it was comparatively little known in the market, and was rarely cultivated. The whole supply was drawn from the swamps, where the vines struggled in unaided rivalry, with bog hay, moss, and bushes. Some years they yielded abundantly, and the farmer generally sold them at about a dollar a bushel, which merely paid handsomely for picking. If there were years of scarcity; they were not much higher, for Fungus had not learned to prize them, and of course, felt no perplexity, whether the sauce dishes were large or small. They have had a healthy growth, and have fairly worked their way into popular favor, upon their own merits. Though not the greatest vegetable boon Providence has ever vouchsafed to mortals, they are very generally appreciated by all classes, by those of simple tastes, as well as by epicures.

In the process of cultivation it has been found that there are several varieties of our American species, and quite likely sub-varieties, the result of hybridization. This fruit is entered upon the lists for improvement by our zealous amateurs, and it is not improbable that in the next twenty years the varieties will be as numerous as those of the strawberry. All the varieties of the American species, are much superior to the European, both in size and quality. While that remains uncultivated, ours was introduced into England by Sir Joseph Banks, some thirty years ago, and has been received with favor.

The Selection of Soil for a Plantation.—There is a difference of opinion among cultivators as to the best locality for this vine. Some affirm that it will flourish and bear abundantly upon upland, while others claim, and they are largely in the majority, that it can be grown to advantage only on wet land. It is certain that the native localities of the plant, are invariably either swamps, or wet places upon the sandy margin of ponds and lakes. It also has an affinity for salt, and is frequently found growing in wet meadows near the mouths of creeks, in places just reached by the highest tides. While the plant is abundantly distributed in these swamps, it is found to be most productive in those localities that remain flowed during the Winter and Spring. Here the vines are often loaded with fruit, while others in dryer spots are barren. The plant does not blossom until quite late, and those standing in the water, are delayed several days in their blossoming, until the critical frosts are over.

Cultivators have taken hints from these facts in the natural history of the plant, and have selected swamps that can be flowed at will for their plantations. More attention has been paid to this crop in Massachusetts, than elsewhere, and the favorite localities in that State are upon Cape Cod, where the cultivator can have swamp, muck, and sand in any desirable quantity.

Preparation of the Ground.—Though the plant rejoices in abundant moisture, it is particularly important that stagnant water should be avoided. The scum and slimy moss generated in such places, injure the vines, and finally destroy them. It is usual in a thorough preparation of the soil, to give it surface drainage, and to remove all brush, stumps, and tussocks, and to cover it with three or four inches of sand. Though the plant will grow in muck very well, and sometimes bear fruit, the sand is said to pay abundantly by giving larger and more uniform crops The spreading of sand or coarse gravel, adds largely to the expense, but is not an insuperable objection, where the material lies immediately upon the bank of the swamp. There are thousands of acres lying near the sea shore, that nature seems to have adapted to this crop. They only need capital judiciously expended, to fit them into cranberry yards. It is said to pay well to expend four and five hundred dollars an acre in preparing the soil. All manures are worthless to apply to this plant. It asks only muck, sand, and water, to give the most bountiful crops in perpetual succession.

To make the crop certain, it is necessary, especially in localities remote from the sea air, to have the means of flowing the plantation at will. Where a small stream runs through the swamp, this is easily managed by a dam and water gate. Near the sea, the early and late frosts are so much kept off by the marine breezes, that the flowing is less important.

Selection of Vines.—There is a considerable difference in the varieties of this fruit. The Bell, the Bugle, and the Cherry cranberries are distinct sub-varieties, recognized among eastern cultivators. It is better to order plants from well cultivated yards, than to take them up from native localities. If you have confidence in the cultivator, you will need to give yourself no further trouble about plants. But if you choose the natives, it should be borne in mind that many of them are barren, and the stoutest, largest plants have this distinction. It is well to mark the most productive vines while in bearing, in order to make a good selection. If you can not do this, take vines of medium thickness, or strength of stalk, and bushy leaves.

Deep and Shallow Holes for Trees.

Recently several influential writers have come out strongly in favor of digging the ground very little, or none at all, where trees are to be planted, and several examples are given to prove the correctness of the theory. They are partly right and partly wrong, and the danger is that those who are generally careless, slip-shod planters, will take what is wrong, and keep on in their old ways. There are three important points to be kept in view in planting out trees of all kinds—especially fruit trees.

First. A portion of the roots should be so near the surface, and in so porous a soil, that they can enjoy air and the sun's warmth.

Second. Part of the roots must go deep enough to secure abundant moisture or sap at all times, particularly when the surface soil is temporarily parched by drouth.

Third. The sub-soil, so far down as the roots penetrate, should be of good character, that is, it should have been so exposed to the action of air as to destroy the soluble proto-salts of iron, magnesia, etc.; and also organic acids, otherwise these substances will be absorbed and act as poison.

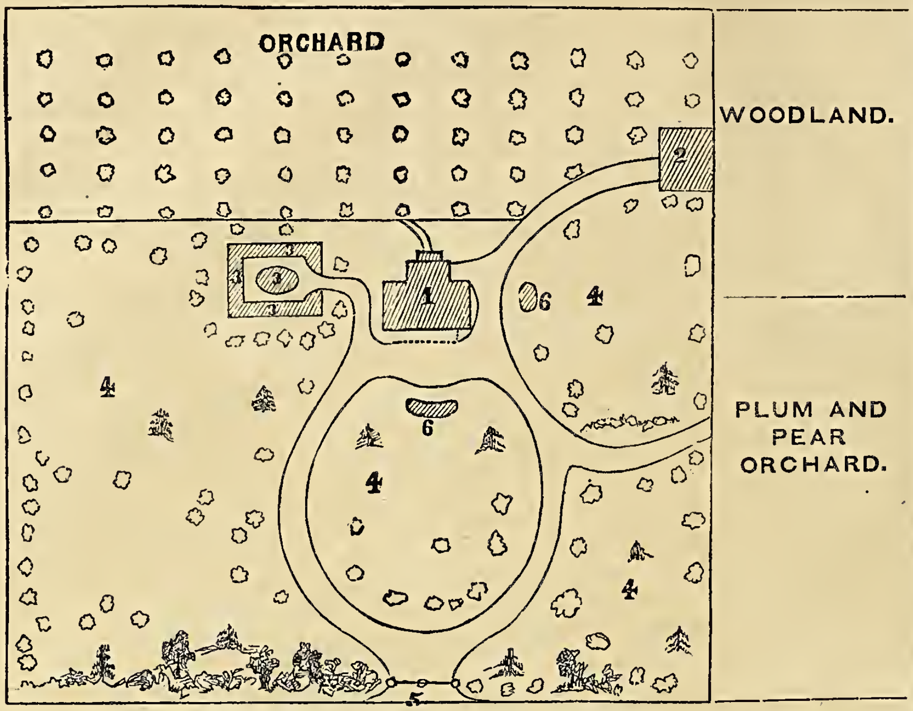
The most important part is to have the soil deeply drained, so that it shall not be saturated with water, which shuts out free circulation of air. If a soil be heavy, cold, and damp, and the tree planter will not take the trouble to change its character by deep draining, it will be better for the tree, to cut off its tap-roots, and set it directly upon the surface, covering its roots with a bank or bed of good surface soil taken from some adjacent or distant locality, as the case may be. This in effect secures drainage.

A better plan is to dig deep, wide holes, and fill them a little more than full with good surface soil, and provide for drainage down to the bottom of the holes thus made. Then plant the trees only to the depth they stood in the locality whence they were removed. By this plan, a light open soil is secured. A part of the roots will then spread out near the surface, and enjoy the direct influence of air, warmth, and even light to some degree. Another portion of the roots will extend down into the good soil prepared for them, and in the dryest weather will there find abundant moisture to supply the large amount of sap evaporated from the leaves and appropriated by the fruit. A much larger feeding ground is thus provided, and the tree will flourish, and bear more abundant fruit.

American Pears Abroad.—Among American pears, those which have proved to be really good in England, are the Tyson, Seckel, and Moyamensing. There, as here, the Seckel is made "the standard of flavor."

The Latin word for man is *vir*. A little fellow, who, like too many others, was set to studying the Latin language before he could scarcely use his own, astonished his teacher by the following translation: "*Vir* is a man; *Gin* is a trap: therefor *virgin* signifies a man-trap.

"I presume you won't charge anything for just *re-membering* me," said a one-legged sailor to a wooden-leg manufacturer.



PLAN OF GROUNDS AROUND A COUNTRY RESIDENCE.

Explanations—1, House—2, Barn—3, 3, 3, 3, Flower Garden—4, 4, 4, 4, Lawns—5, Entrance to the premises—6, 6, 6, Flower Plots or Beds.

One Plan for Laying out Country Grounds.

To the Editor of the American Agriculturist:

Can you help an old subscriber out of a bad scrape? I bought Downing's Landscape Gardening, to assist me in laying out my grounds; but the plans are too expensive, and my cranium is too thick to comprehend and carry them out. I like your plan in the October No., but I can not arrange my trees and walks and shrubbery to suit me. There is not a tasty front yard in this county, so far as I can learn....I send herewith a rough sketch of my premises, their dimensions, etc., and wish you would draw out a plan to suit it. Yours, to command, as Mr. Bunker says,

N. E. Blodgett.

To the above out-spoken letter of our friend (whose locality we do not recall), we answer, that while it is usually impossible to devote the required time needed to examine and respond to individual plans and specifications, we have in this case taken the notes forwarded, and worked out a plan, which may be suggestive both to Mr. B. and others. The explanatory notes above, furnish all needed information in regard to the design. The engraver has made the trees all alike; those in the lawns, 4, 4, 4, are intended for various deciduous and evergreen trees and shrubs. The entire front and sides might be lined with an Arbor Vitæ screen, if desired.

* * *

Hints on Starting Private and Commercial Nurseries.

In response to a great number of questions from various sources, (including half a dozen formal ones from S. A. Allison, Indiana County, Pa.,) we throw together here a few hints which will cover the ground embraced in all the queries we believe.

1. *Seeds and Sowing*—Seeds of all tree fruits, including also nuts, acorns, locust, etc., should be gathered and placed in the ground, or put in boxes of earth as soon as ripe, that is, during Nature's planting season. Most of them may be made to grow after keeping months or even years, if not too thoroughly dried out, but they rarely vegetate so well. If not planted at once, they may be put in boxes of moist but not wet soil, and be exposed to freezing during Winter, or not. If not put in earth, they should be kept in a cool place entirely away from fire heat or warmth, and not in a garret room heated by the sun's rays. As early as possible in Spring they should be put into a *seed bed.* Some plant them at once in drills or nursery rows, but it is better to prepare a good seed bed to start them in, and afterwards transplant to the nursery. For a seed bed choose a warm mellow soil, and prepare it by *deep* spading and working in a heavy coat of well-rotted manure. Pulverize the surface well, and rake off smoothly. Sow thickly, in drills eighteen inches apart, covering with nearly an inch of finely pulverized soil. Use seed freely. Better have a quantity of the weakest plants to throw away, or set elsewhere, than not have enough in the seed bed. All that is now necessary, is to keep the ground well hoed between the rows, and pull all weeds growing among the plants. If the seed did not come up well, disturb the earth as little as possible in the row, for the remainder may come up another season. Many of the seeds of stone-fruits frequently remain in the ground a year before sprouting.

2. *Transplanting to Nursery Rows.*—Peaches, and many of the plums, pears, and apples, if they make a good growth, will be ready to transplant the next Spring, while the more slow growing trees may very properly remain in the seed bed two years. As it takes from one to three, and sometimes four years, after setting in rows, for the trees to attain a good planting size, and as the ground can not be readily enriched while they are growing, it is important that the soil be heavily manured before putting the trees in nursery rows. The ground should also be deeply plowed and subsoiled, or spaded and trenched. Excepting for some evergreens which thrive in damp ground, the nursery soil should be naturally light and dry. Having prepared the ground as early as it can be worked in Spring, lay off straight rows three to three and a half feet apart, with a plow or spade, and set the young seedlings eight to twelve inches distant in the row, according to their prospective size. It is well to set them by a stretched line, so as to have the rows perfectly straight. If the main or tap root is long, clip the lower end to induce side roots. Set them at the same depth as they stood in the seed bed.

3. *Budding or Grafting.*—Seeds of the apple, pear, peach, cherry, and plum, rarely produce *good* fruit; therefore some approved sorts are to be worked upon them by budding or grafting. As buds are set more expeditiously than grafts, and also into younger trees, budding is more frequently adopted. The operation was so fully described and illustrated in Vol. XVI, page 161, that we omit it here, merely remarking that it is done in June and July, upon stocks one third to one half an inch in diameter. Most trees will be of the right size the same Summer they are set in rows. We have seen the quick growing peach transplanted with a trowel when a few inches high, and budded the same Summer, making trees suitable for planting out in the Fall of the succeeding year. Usually, however, trees are budded the season they are set in rows after growing one or two years in the seed bed. Most trees need two years' growth from the bud to attain a selling size. The next season after budding, the tops of all trees in which the buds look fresh, should be cut off about two inches above the bud. Some cut these away in the Autumn after budding. Rub off any suckers which may start out, and tie the new shoot to the projecting stump, if it is not growing sufficiently upright. About midsummer, cut away this stump, so that the late growth may heal the wound. The trees are now left to attain a planting out size. Remember to keep down all weeds and to have the ground well lightened with the plow or horse hoe. Some of the buds will fail to grow, and some trees will be too small, or of too weak a growth to be budded the first season. Attend to these the next year, and if any are still left, graft them the following Spring, after the manner described on page 82 of this volume (March No.) Some tree growers, and still more vegetable physiologists, maintain, and with a good degree of reason, that trees should be grown in their natural state until planted in the orchard, and then grafted in the branches. They contend that a wilding is more hardy, and has a better constitution than a grafted tree, and that as much of the native stock should be preserved as possible.

4. *Distance apart of Trees in Orchards.*—This will depend upon the kind, the size and age to be attained, and the manner of training. For the long-lived, large growing apple trees, 25 to 30 feet apart is a good distance. When land is valuable, and to be devoted chiefly to fruit, it is not a bad practice to set apple trees 15 feet apart, and cut out the alternate trees when they attain a large size. *No tree should shade the soil for several feet around the base of another tree.* Trees trained as dwarfs, or with low compact heads, may stand nearer than those trained higher with large spreading heads. Peach Trees which are short lived, and never grow to a large size, may be set 15 to 20 feet apart. The above italicised rule in regard to shading, should be kept in mind.

No fruit seeds can be depended upon to produce trees true to the parent stock. The pits of good peaches and cherries are more likely to produce good fruit, than those of poorer varieties, but no reliance can be placed upon this mode of propagation. Grafting and budding are so easily performed, that one or the other should always be resorted to.

* * *

To a squire who was boasting of his horse' speed, Sam Foote replied—"Pooh, my horse will stand 'faster' all day than yours can gallop!"

How to Raise Strawberries.

Our old subscribers need little instruction on this point, as our former volumes will testify; but our new friends will look to us for words of counsel. And as this present month of April is the best season of the year for planting strawberries, we give our counsel now.

Strawberries can be raised on almost any soil, and with almost any treatment, but there is a right way of growing them, and this we desire to point out.

As to soil, a warm, sandy loam is the best. If it is naturally deep and rich, it will need no spading and manuring, but such soils are rarely found. Every one must have noticed that strawberry beds on shallow soils often dry up before the crop is half grown. It is chiefly to obviate this, and to secure large handsome berries, that it is important to deepen the soil, thus furnishing room for the roots to ramble in search of food and drink in dry weather.

Having first laid off the plot of ground designed for planting, begin on one side, take off the top soil one spade deep, over a space four feet wide, and carry it in a wheelbarrow to the other side of the patch. Then give this uncovered space a good dressing of old manure, and spade it under, mixing it all thoroughly. Now uncover another breadth four feet wide, throwing the top soil of the same upon the bed already manured and spaded. Then dress the new bed with manure, and spade it in as before. Pursue this method until the whole plot is trenched and manured. The top soil taken off from the first bed will, of course, cover the last. Then, if convenient, spread a coating of ashes and black earth from the woods over the entire plot, and work it into the surface, and finally rake smooth.

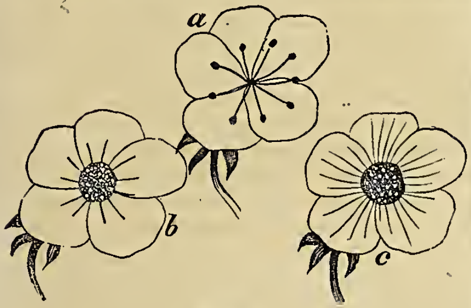


Fig. 1.

This plot may now be set with vines either in rows or beds. If pistillate varieties are cultivated either in rows or beds, at least every fourth division should be planted with staminate, or perfect (hermaphrodite) plants, which are preferable, to fertilize the pistillates. The annexed illustrations will enable the inexperienced to determine the sexual character of the strawberry blossom. *a*, fig. 1, shows a staminate or male plant. It has in the center only stamens, made up of thread like fibers (filaments) each terminated by a little knob (anther) containing the yellow fertilizing dust (pollen)—*b* and *c*, fig. 1, represent pistillate or female plants. The central parts consist of small greenish protuberances, which are the embryo or undeveloped fruit, but contain no *perfect* stamens. The filaments are sometimes present as in *b* but they bear no anthers, and hence can not fertilize the pistils below them by a discharge of pollen. In fig. 2, a perfect or hermaphrodite flower is shown. It contains both the pistils and perfect stamens. *p* represents the pistils of a flower—*a*, *b*, a single stamen; *a* being the anther, and *b* the filament. The following are among the best strawberries now raised, according to our experience and observation: Wilson's Albany Seedling, *perfect flower;* Hooker's Seedling, *perfect flower;* Hovey's Seedling, *pistillate;* Longworth's Prolific, *perfect;* McAvoy's Superior, *pistillate;* Peabody's New Hautbois, *pistillate;* Early Scarlet, *perfect.*

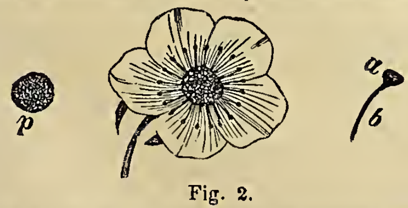


Fig. 2.

There are two leading methods of managing the plants. One is that of clipping the runners continually, and so keeping them in hills or rows; the other, that of letting them cover the bed or plot at once, spading under the older plants every year, or breaking up the beds entirely and making new ones as fast as the old run out. The latter is probably the easiest method; the first produces the largest and best fruit. Lazy men and very busy men generally choose the latter—amateur growers adopt the former.

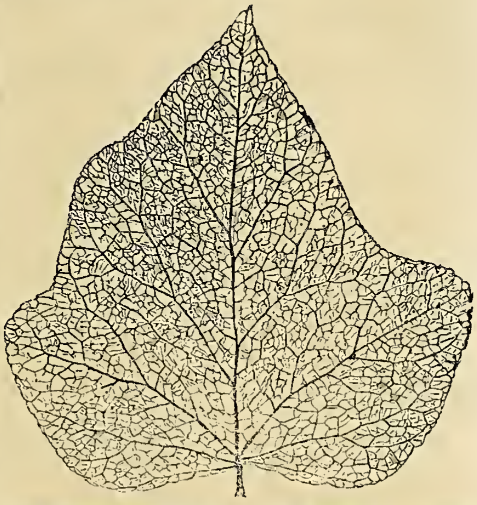
A Dish of Peas.

The pea is perhaps the most popular vegetable grown; it garnishes the table of Jew and Gentile all over the globe. Doubtless, it is not as nutritious as roast beef or baked beans, but it is very palatable and useful. The Doctors say that peas purify the blood; the good doctors *like* peas! As this vegetable is so easily and quickly grown, every owner of a garden should be ambitious to have an early and abundant supply. To bring out all their good qualities, they should be cooked properly One garden author says, "they are often *miss-boiled.*" Does he mean that young Bridget is allowed to cook them, instead of her mistress? They should be picked, shelled, cooked and eaten, all within four hours. To give them the last touch of perfection, some nice cooks throw in a sprig or two of mint, while boiling. But let us raise them, and afterwards attend to the cooking.

Culture.—For the earliest garden crop, choose a warm corner, under the lea of a high, tight fence, and with a light, dry soil, not over-rich. The ground should have been enriched the preceding year; if manured the same season, the crop will run to vines with little fruit. A light dressing of ashes may perhaps be allowed. Spade up the ground as soon as the frost has fairly left it, and level off with a coarse rake. Make drills about two inches deep and six inches apart. Sow the peas about an inch apart in the drills, and cover them with the back of the rake. Then leave a space four feet wide for a walk, and make another double row of drills in the same way. As soon as the peas are up, or before, they may be "bushed," the bushes being set between the narrow drills—one row of bushes answering for two drills. Of course, the size of the bushes will be regulated by the known size of the varieties of peas planted. Some persons prefer another mode of sustaining the vines, like this: Set firm stakes, four to six feet high, along the sides of the rows, about six feet apart. Fasten strong cotton twine from pole to pole, raising the first or adding a second line as the vines grow. Two lines will generally be enough for a row.

We need hardly add that the plants should be hoed as soon as they rise a few inches above ground, and this tillage should be continued for several weeks. To hasten the maturity of the first crop, nip off the ends of the vines, soon after the blossoms appear. This checks the growth into mere vines, and throws the strength of the plants into the pods. One can gain several days in the growth of his early crop, by planting the drills east and west, and setting up boards a foot wide on the north side of each row.

As to the best kinds of peas for garden-culture, our own experience would class them about thus: For the earliest: *Daniel O'Rourke.* For the next earliest; *Early Kent,* or *Prince Albert.* To follow these, we should at the same time plant the *Champion of England.* This last is one of the best peas now grown.



Inexpensive Household Ornaments....III.

SKELETON LEAVES.

If a leaf of a tree be examined particularly, there will be seen numerous small fibers or ribs, running in various directions through its substance, composing, usually, a fine network. These fibers are really little branches of the wood of the tree, spreading out and ramifying until the finer ones are too small to be seen without a microscope. The interstices between these veins are filled with a softer substance, cellular tissue, containing the coloring matter. The cellular tissue decays more readily than the woody fiber, and if properly managed can be removed, leaving a network more delicate and beautiful than the finest lace. Specimens of this work may often be found executed by insects, as, for instance, when the slug infests rose bushes; it eats the tender tissue only, the woody part being too hard for its teeth.

We recently received from Mr. J. Fogle, Muscogee Co., Ga., some very beautifully prepared leaves, one of which we have engraved, and present it with his description of the process, which may be new to many. Leaves of a rather firm texture are selected, as the apple, pear, camellia, ivy, bay, cape jessamine, etc. The best time for using is when they are just matured. Previous to this they are too tender and the fibers are broken; if too ripe, the cellular tissue becomes hardened, and is not easily removed.

Single leaves, or branches containing leaves and seed vessels, are steeped a few minutes in hot water, then placed carefully in cold rain water, and left undisturbed until sufficiently decayed. This will require from twelve days to three weeks or even more. The water need not be changed. When the leaf becomes soft and pulpy, take it out carefully, lay it on a plate containing just water enough to cover it, and pass a fine camel's hair brush gently over it to remove the pulp. If it does not all come off easily, return it to the water for a few days more, until all but the fibers can be brushed off. The skeletons are improved in appearance by bleaching, which may be done by mixing about a teaspoonful of Chloride of lime, to half a pint of water, and letting them remain in it until white, which will require about an hour. Wash them with clean water, removing any particles of lime with a brush, and dry them between folds of blotting paper. They may be arranged in wreaths, bouquets, etc., and make a pretty mantel ornament. To preserve them uninjured from dust, etc., they may be kept covered with glass. The specimens sent to us are so beautiful, and the process of preparation so simple, that we advise others to join us in providing a supply of them for household ornaments.

An Excellent Book for Housekeepers and others.

We believe we are consulting the best interest of our readers by going out of our usual course, to specially recommend a particular book as worthy of being purchased and studied not only by housekeepers, but by all classes of readers, for the subjects discussed are of practical moment to all. We refer to Youman's "*Hand-Book of Household Science.*" This is not a clap-trap book got up by a 'retired housekeeper' and filled with all sorts of recipes, good, bad, and indifferent, but a thorough, scientific, and practical work, discussing in a condensed but plain manner the various operations connected with every day in-door life. Not only are the practical details attended to, but the principles are explained upon which are founded the various operations of cooking, preserving meats and vegetables, cleansing, etc., etc. The laws of heat, for example, are taken up and illustrated, and then they are applied in detail to the preparation and use of fuel, proper construction and management of stoves, fire-places, chimneys, ventilators, the best kind of clothing, etc. After an interesting explanation of the nature and laws of light, we have their application to the lighting of dwellings, the combination of colors, preservation of the eyes, etc. But we can not go into details. The book contains 447 well filled pages, and embraces 813 sections or sub-divisions upon separate topics, each of which is referred to in an index. The Author, Prof. Youmans, who is one of the most interesting, and instructive lecturers we have ever listened to, has devoted much time and great labor to the preparation of this book, and he has admirably succeeded in filling it with just such information as we would gladly introduce into our columns set apart for In-Door work, but which our limited space and want of time prevent our doing fully.

We would like to see the occupants of the household not the mere drudges they too often are. By this we do not mean that we desire to see them less actively employed, but we would have their minds occupied and interested in the labors of their hands. Every kitchen process, even to using soap or hot water for cleansing, is strictly a chemical operation, and is founded upon chemical laws, and we hold that the understanding of these laws would not only render all these labors more interesting and less a drudgery, but would also tend directly to their better performance. Cooking food, mixing bread, coloring, etc., are just as much chemical operations, as the preparation and compounding of medicines; the best housekeeper is she who best understands the whys and wherefores, as well as the how.

This Hand-Book of Household Science may well be kept as a reference book, but it should also be *studied* through. It can not be merely read through in a day, or week, or month. Those who are little acquainted with science, may at first open it at random, and read any section by itself, or select any topic from the table of contents, and read about that, and then another, and so on, until they become interested, but we would advise every one while reading on different topics, to also begin and study the whole through, slowly, carefully, and even painfully, if the principles of chemistry and philosophy be not previously familiar. When the topics here treated, are discussed by the family at the fireside, and at the table, useless gossip will be displaced, and the younger members of the family will grow up more intelligent, and better reasoners and thinkers, and enjoy life more, both physically and mentally.

Though the work is written in the Author's plain, popular style, we can not recommend it as easy reading. Some hard words are necessary, though they are explained in the first chapters.

We have spoken thus strongly of this book, not from any personal interest in the author or the publishers, but because it is the best book of the kind, and such a one as we would like to have all our readers, and indeed every family in the land, own, read, study, and understand. We shall take special pains to procure a supply of copies, and keep them to furnish to such of our readers as can not procure them more conveniently of booksellers near at hand. The retail price of the book is $1.25, at which price we can send it post-paid by mail. If several persons wish to send together and have them come by express, the cost of the postage (25 cents each) will be deducted from the price. To any book-seller who will aid in the distribution, we will furnish them by the dozen (for cash) at the usual trade price.* We wish it distinctly understood that this departure from our usual custom, in thus recommending a particular book, and offering to aid in its circulation, is an exceptional case, not undertaken for pecuniary considerations, but because this work so nearly supplies a kind of information which we would desire to communicate wholly through our own columns, but which we can not hope to do *fully* in half a dozen volumes.

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* To any person sending us a club of ten subscribers at 80 cents each the present Spring, we will send a post-paid copy of the Hand-Book of Household Science as a *premium*.

Freezing Cockroaches a sure Remedy.

To the Editor of the American Agriculturist:

I noticed in the March No. of your paper an article on "Freezing out Cockroaches." Our whale ships, particularly those that have cruised for three or four years off the coast of Peru, or in other warm climates, when they return to this port, literally swarm with cockroaches. If, however, they remain at home during the Winter, not one *live* roach can be found in the Spring, notwithstanding there may have been millions on board when the ships arrived. If, by chance, any house in this vicinity becomes infested with these nuisances, so well do our housekeepers understand the efficacy of the freezing process, that they are seldom troubled with them after having a few days of freezing weather. All that is necessary to be done, is to let the fires go out, open the windows, the inner doors, especially those of the closets and lockers, and allow the cold air to have free circulation through the house for a few days. This process is *certain*, provided the temperature of the air is somewhat below the freezing point. If down to zero or below, so much the better. It is, perhaps, needless to say that the family occupying the house, will find it advisable to leave during the time this process of extermination is going on.

New-Bedford, Mass. AN OLD WHALER.

Hints on Cooking, etc.

[COPYRIGHT.]

[We take *by permission* another lot of twelve valuable recipes, from the copy-right work of Mr. Crozier, of Trenton, N. J., who was formerly largely engaged in the baking business, preparing extracts, etc. We have the testimony of several housekeepers to the value of the recipes published in our last.—Ed.]

Sponge Cake.—To 11 eggs, slightly beaten, add 1½ pounds of fine sugar, and beat up until very light, with a wire beater, then flavor with extract of Lemon, and add about ½ a teaspoonful of saleratus dissolved in as little water as possible; mix this through, and add 1½ pounds of sifted flour; work this in gently, until smooth, with the beater. Put the batter in small, greased tins, with a spoon, and bake as soon as possible in an oven or stove, hot enough for bread. If made in one or two cakes, the oven must not be so hot, and the saleratus and water left out.

Almond Sponge.—With a wire beater, beat up until very light and stiff, 1 pound of fine sugar and 12 eggs; flavor with extract of Almond; mix this in well, and add 1 pound sifted flour; mix in lightly, but don't beat the paste. Pour it all in a greased and papered pan, and bake immediately in a moderately hot oven. This will make a 3 lb. cake. The pan should not be more than half filled with the batter. It can be baked in smaller cakes if desired.

Fruit Cake.—Mix together, and beat until light, 1 pound of sugar and 1 pound of butter; then add (few at a time,) 8 eggs, and beat up light; flavor with extract of Clove, (a little extract of Nutmeg will improve it,) then 1¼ pounds of flour, mix it in partly, and add 1 pound of currants, 1 pound of raisins, ¼ pound of citron, and mix it all well through. More fruit can be added, if preferred. Bake in a moderately heated oven.

Vanilla Drops.—Mix together ¼ of a pound of sugar and ¼ of a pound of butter, add 1 egg; mix, and flavor with extract of Vanilla; then add ¼ of a pound of flour; work in until smooth, and drop in small lumps with a spoon, far enough apart to spread on greased pans. Bake in a moderately hot oven.

Wafers.—Mix well together ½ a pound of sugar and ½ a pound of butter, add 2 eggs; mix and flavor with extracts of Rose and Nutmeg; then add ½ a pound of flour, and mix it well through. This paste can be dropped on greased pans with a spoon, far enough apart to spread. Bake in a moderate heat.

Pound Cake.—Beat up together until very light, 1 pound of sugar, and 1 pound of butter, add 10 eggs, (8 eggs will do,) few at a time, and beat up light each time, flavor with extracts of Rose and Nutmeg; mix in these, and add 1 pound of flour, mix it in until smooth. Put in a greased and papered tin, and bake in a moderate heat. A hot oven or stove is required, if baked in small tins.

Washington Cake.—Mix together until light 1 pound of sugar and ¾ of a pound of butter; add 8 eggs, few at a time, and mix; flavor with extract of Pimento, (extract of Nutmeg may be used if desired;) mix in 1 gill of milk, and add 1¼ pounds of flour; partially mix, and add ½ a pound of currants, ½ a pound of raisins, and ¼ of a pound of citron; mix all well through. Put in a greased and papered pan, or two pans can be used. Bake in a moderately hot oven or stove.

Jelly Cake.—Mix 1 pound of sugar and 1 lb. of butter until light, add 8 eggs gradually, and mix; flavor with extract of Orange, then add 14 ounces of flour, and mix well through; then spread the dough out in thin round sheets on white paper, about a large tablespoonful in each. Lay the papers on pans, and bake in a quick heat. Do not bake them too much. When cold, take them off the paper, and put them in piles of two or three thick, with any kind of jelly or jam between each layer; trim off the edges all around, and sift sugar over them, or they can be iced and ornamented.

Orange Cake.—Mix well together 1 pound of sugar and ¾ of a pound of butter; when light, add 8 eggs; mix well, and flavor with extract of Orange, then add ¾ of a pound of sifted flour, and mix until the dough becomes smooth. Put it in one or more greased pans, and bake.

Honey Cake.—Mix together 7 ounces of sugar and 8 ounces of butter, add 4 eggs; mix, and add ½ a pint of strained honey; dissolve ¼ of an ounce of saleratus in ½ a pint of water or milk, and put to it; then flavor with extract of Cinnamon. Mix well through, and add sufficient flour to make it stiff enough to roll out and cut in cakes. Put them on greased pans, close together, and bake in a hot oven or stove. By using less flour, so that it will be more of a batter, it can be baked in larger cakes, in square tins. In this case the oven must not be quite so hot.

Drop Cake—Mix ½ a pound of sugar and ½ a pound of butter; beat up light; add 4 eggs; when well beaten, flavor with extract of Nutmeg, then add ¼ of a pint of milk or water, in which is dissolved ¼ of an ounce of saleratus, then add 14 ounces of flour. Work this in smooth, and drop the dough on the greased pans with a spoon, in lumps a little distance apart, and bake in a heat hot enough for bread.

Fancy Cake.—Mix 1 pound of sugar and ¾ of a pound of butter until light; add 8 eggs, (half at a time,) and beat well, then flavor with extract of Nutmeg or Lemon, then add 1 pint of milk or water, in which is dissolved ½ an ounce of saleratus, then add 1¾ pounds of flour. Work it in until the batter becomes smooth; put it in small greased tins, and bake in same heat as for drop cake. If either of these receipts are made in larger cakes, the oven must not be so hot.

CONVENIENT AND ECONOMICAL METHOD OF PREPARING PUMPKIN AND SQUASH PIE.

An extensive Baker, in good repute for his excellent pies, contributes to the *Amcrican Agriculturist* the following mode which he practices, and which is both convenient and economical: Cut each pumpkin or squash across into halves, and with an iron spoon scrape out the seed and the soft stringy pulp. Then set them, open side up, into a moderately heated oven. The juice, which is the richest portion, will collect on the inside, and when the whole is sufficiently soft, pour out the juice, and scrape out all the "meat," leaving only the rind or outer hard shell. This mass, mixed with the juice, and then the whole stirred up with milk, sugar, and spices, is ready to be poured upon the crust. By this method the labor of paring is saved; none of the pumpkin is wasted with the skins, or in boiling water; and the material is richer than when boiled in the ordinary way.

The best Cough Remedy.—For allaying cough and loosening the throat when stopped with phlegm, we have found nothing equal to the following: mix and shake well together equal parts of paregoric, castor oil, and syrup of ipecac. From one half to a full teaspoonful of this given to a child, one, two, or three times, as may be necessary, has never failed of giving relief in our own experience. If required more than once, give it at intervals of two or three hours. An overdose produces a little nausea, but no injurious effect. The mixture may be prepared and kept in a vial ready for use.—*Ed. Amer. Agriculturist.*

Paper in Spittoons—A Good Hint.—A subscriber to the *Agriculturist* gives the following useful suggestion: Housekeepers know the difficulty of removing clots of phlegm. This may be remedied by cutting a circular piece of paper, and laying it in the bottom of the spittoon whenever it is cleaned out. Any old paper will do, though sized brown or white paper is better, because less likely to tear than common newspaper Old letters answer well.

The Editor with his Young Readers.

ABOUT DIOGENES.

One of the boys writes to the editor that he reads all that is said by "Diogenes redivivus," and learns a good many things from him, but he wants to know more about that old man with the lantern, for, he lives in a new country, away west of the Mississippi, and they have no books in his neighborhood in which he can find anything about Diogenes. His mother thinks that "redivivus" means 'come to life again' but is not certain.. Your mother is right. The old farmer who writes the lantern chapters, chooses to call himself old Diogenes returned to life. Diogenes was born in Pontus, (in Asia Minor,) 413 years before Christ, or 2,273 years ago, and lived to be 90 years old. He was a Cynic Philosopher, that is, one of a class who prided themselves in their contempt of riches, amusements, and even of the common luxuries and comforts of life. They dressed very plainly and lived scantily. They were disposed to scorn the rest of mankind, and indulged in finding fault with the failings of other people. Altogether, the cynics were not a pleasant class of men, yet they doubtless did much good by their fault-finding, and Diogenes, who was one of the most noted of the cynics, uttered very many smart sayings. He was accustomed to sit by the way side under the shade of a tub, and criticise the conduct of all who passed near him. At one time he went searching through the streets at mid-day with a lighted lantern, and when questioned as to what he meant, he said, he was "trying to find an *honest man*," one whom he could not find fault with. Our Diogenes, you know, is searching with his lantern to find a really *good farmer*, one whose mode of farming he would not find fault with. He makes some pretty severe criticisms, but we let him keep on, hoping that his lantern will throw some light on bad farming practices, and that his criticisms will lead many to see the causes of their failures in cultivation.....One or two things more about old Diogenes. Alexander the Great paid him a visit one day as he sat by his tub, and tried to tempt him away from his severe mode of living, by offering him great riches, or anything else he desired; but the only answer received, was the request that Alexander would "stand from betwixt him and the sun"—as much as to say, you keep your riches, and don't deprive me of the benefit of the sun's warmth and light....At another time the philosopher Plato, had been teaching his scholars that man was but an animal—"a biped without feathers." Diogenes took a rooster and plucked off all the feathers, and then threw him into the midst of the scholars, saying "that is one of Plato's men." By such significant acts and sayings he inculcated a great many truths in a striking manner.

ANSWERS TO PROBLEMS.

No. 9. What four U. S. coins just make 51 cents. Answer.—Two twenty five cent pieces, and two half-cent pieces. Correct replies from Edward Mason jr., Elroy M. Avery, Frank Fancher, T. R. Smith, Edward F. Mansfield, James M. Bradley. Some answered one 25 cent piece, two 12½ cent pieces, and one 1 cent. Not correct, because the 12½ cent piece is a Spanish, and not a United States coin, and never should be. We are glad to find that the 6¼ cent and 12½ cent pieces, which are so inconvenient in making change, but so convenient for small shaving, are nearly driven out of circulation. They now pass for 5 and 10 cents in this city. Spanish "quarters" pass for only 20 cents.

No. 8. Economical Fencing (from page 89)

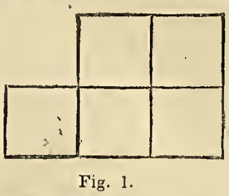


Fig. 1.

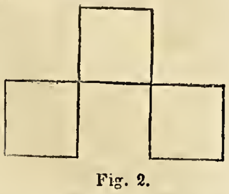
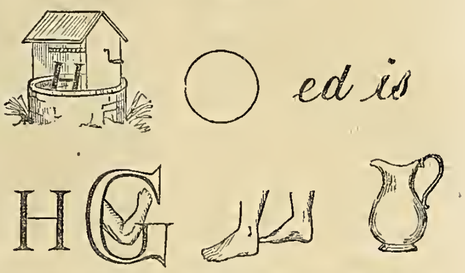


Fig. 2.

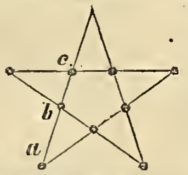
The puzzle was, to take away 3 of the fences from fig. 1, and leave only three perfectly fenced fields with no surplus fence. Fig. 2, shows how it is done. You can perform this best by cutting 15 sticks and laying them down on the table as shown in fig. 1, and then ask your playmate to take up only three sticks, and yet leave three fields only. We have received correct drawings like fig. 2, from Edward Mason jr., John H. Treadwell, Elroy M. Avery, Edward P. Michals, Edward F. Mansfield. (The Edwards are in the majority in this list.)

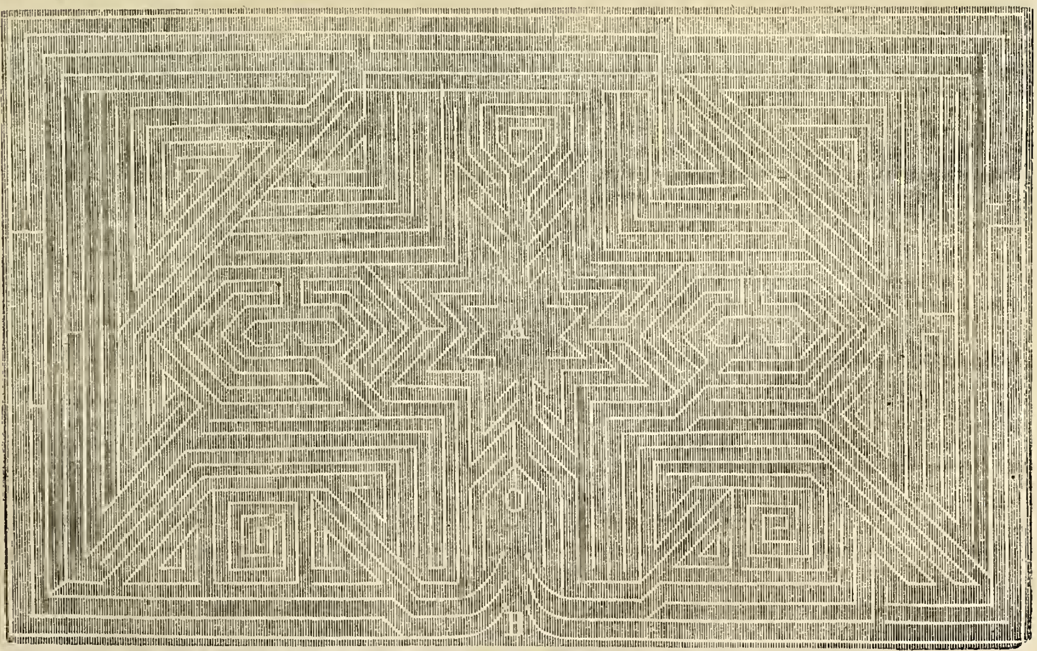
NEW PROBLEMS.



No. 10. *Illustrated rebus* by Aunt Sue, contains a pleasing feature, which you will be sure to like *when you see it*.

No. 11. *The star puzzle* will require some ingenuity, if you are not acquainted with it. It was contributed by I. W. Capwell, Iowa. In the figure, you see ten corners where the lines meet, or cross each other. Take nine kernels of corn, or buttons, or bits of paper; lay one of these on a corner as at *a*, then take it up, and jump it over *b*, the next corner on a line with it, and leave it at *c*. Take another kernel, lay it on another vacant corner, jump it over one corner and leave it, as before. Keep on in this way, jumping every time from a vacant corner over to another, until the nine kernels are placed. If not worked right, there will be no vacant corner to jump from, before all the kernels are laid down. Try to discover the rule for performing it.—A second puzzle with the same figure will be to jump off the corns. Beginning at one point, jump one kernel over another, and take off the one jumped over, and so keep on until you have only one kernel left. You will be bothered to get them all off without having some one left where the last one can not be jumped over it.





No. 12. LABYRINTH.—By Aunt Sue. To pass from *B* to *A* without crossing a line.

THE FROG'S MUSIC LESSON.

Though we are writing for April, it is early in March, just now, and the frogs are with us already, singing their Spring notes. The old saying is, that Spring does not come in earnest until the frogs have been frozen in twice, and come out the third time. If the poor fellows don't get frozen in more than twice yet, our fruit trees will rejoice, or we shall, for we are very much afraid the fruit buds now swelling will be nipped yet by Sir Jack Frost, in one of his later visits. They can not hide away like the frogs in deep water, out of reach of pinching Jack. A few days since, we commissioned one of our artists to make for the *Agriculturist* boys and girls, an original sketch of the Frogs in Spring. (We have often told you that frogs and toads are our favorites, not so much for their good looks, or good music, as for their good deeds in catching noxious insects in the garden). Well, you see what a picture the artist has brought out. Rather comical, but quite expressive. We suspect he has been in consultation with that friend to whom we surrendered the editor's chair for an hour, last Summer. Do you remember that funny dream he had, of all the birds and frogs and insects in concert? Perhaps the artist has himself been attending such a concert, and sketched his picture when thinking of the performances, and how it would appear if the creatures who make nature's music, were obliged to take lessons, as girls and boys do, who wish to sing well. Ha! Ha! Ha! What a Picture! Professor Frog giving music lessons to his pupils, while the insects are dancing a waltz in a circle over head. How earnest and imposing the Professor looks through his spectacles, and with what a dignified air he keeps time with the cat-tail in his paw. The young beginners seem very intent on learning the tune, hoping no doubt for the time when they shall be sufficiently accomplished to give one of those charming Spring serenades we love so well to hear, telling us that Winter is passed, and all nature is about to become musical and happy....Are you laughing because we call the piping of the frogs, music? Well, we know Jenny Lind, or *Jenny Wren* can either of them make rather sweeter sounds, but when we listen to the *meaning* of the frogs notes, we hear real music in it—and the sound itself is not so bad either. Listen to the deep bass of that old patriarch seated on a projecting root just on the water's edge, as he brings out his bellowing "*chug gr-r-rum, gr-r-rum*," and hear his lively little grandson, perhaps, with his sharp treble, *pe-leet, pe-leet*, sounding out from the cup of a water-lily where he has been taking a nap; and then what a musical *ker-chung* they both give, when you suddenly raise your fishing rod, as you get a glorious nibble. But what do they *mean* with all their curious noises? Every note they give, says "we're happy," and there's music in that surely; and thus even their humble song praises the Creator who gives them enjoyment.

PROFESSOR FROG AND HIS PUPILS.

OUR PET FROG.

In our sanctum here, we have an *aquarium*, or glass case, filled with water for the accommodation of some fishes and other water inhabitants. Among them is a frog that formerly lived in the country, but was brought here by a friend and introduced to city society. He was only a tad-pole (pollywog) then, but we have seen him push out his legs, and lose his tail, which at first answered the double purpose of a rudder and sculling oar, and he now rejoices in full developed frog-hood. Although he might perhaps enjoy his freedom better, where he could roam about at will, and play *hop-scotch* and *leap-frog* with his old companions, he takes things very philosophically. Most of the time, he sits perched upon a little rock in the middle of the aquarium, looking very demure, as if watching what is going on in the office; or perhaps he is thinking of old times. Formerly he had an amphibious companion, a little lizard, or water newt; and although both of these creatures are said to be "cold blooded," there appeared to exist a warm friendship between them. The lizard, when tired of swimming about, would always crawl up the rock, and then climb upon the frog's back, and creep up until he was seated with his fore paws upon the frog's head. Master Frog said not a word, but only winked permission when he felt him coming, and patiently allowed him to occupy his favorite resting place. Occasionally the frog enjoyed a bath, and then he would give a sudden plunge, pitching Master Lizard, heels over head, sprawling into the water. But one of the hungry horned pouts, or catfish, bit off the lizard's tail, and he died one day—of *mortification* probably—and the frog is now left alone....It would amuse you to see him eat. He is very particular about his food, which consists of insects. They must be alive and kicking, or he will not notice them—he seems to despise cold victuals. But throw a lively fly or cockroach in the water—the boys often bring him cockroaches—and the frog takes good aim and with a sudden spring, leaps across the aquarium and snaps up the insect in an instant. He has afforded us much pleasure by his maneuvers, and is quite a pet with all in the office. We have seen worse pets than our frog. He certainly keeps on a wiser look, and is not half so mischievous as some of the other animals in our aquarium, that persist in nibbling every green plant we introduce, and thus compel us to change the water every month or two, which the plants would keep pure, if they were allowed to flourish. These animals often remind us of some human animals, who destroy the very things which would conduce to their health and happiness. By the way, have you a water cage—an aquarium? You perhaps remember that we gave you a full description of them some time ago—in Nov. 1857 (Vol. XVI, p. 256).

THE TOAD DOES UNDRESS.

In answer to a request that our young friends would inform us, if they ever saw the toad pull off his coat and pants, as described in the Dec. No., Vol. XVIII., p. 371, B. Wentworth writes: "More than sixty years ago," (the *old* folks do read the children's columns,) he observed an occurrence of the kind, the performance being similar to the account we published. He says: "When the toad stripped the skin from his fore legs and toes, it resembled a person turning the wrist of his glove over his fingers, and pulling it off wrong side out." Watch the toads this Summer, and see if you can catch one of them pulling off his clothes and eating them It will be an amusing sight.

A PIECE OF GUM TO CHEW!

Attention, all! John, what are you chewing and rolling around in your mouth at such a rate; not tobacco surely. "Oh, no Sir, nothing but chewing gum; there's no harm in that I hope." Wait a moment, let us look at the business a little before deciding. If only you and a few of your companions up in Maine there, where spruce trees are so plenty, practiced gum chewing, we might give you our private opinion in the matter, and should not ask the attention of all the *Agriculturist* boys and girls. But rolls of chewing gum are now sold in confectioners' shops, at the druggists, and even on the street corners in many cities and villages, almost as frequently as sugar candy. And, would you believe it? there are large manufactories for putting it up to supply the great demand. Why, one manufacturer alone has, it is said, sold during the year past, about 70,000 boxes, each box containing 200 rolls, or in all 14,000,000 rolls! Whew! *Fourteen million rolls of chewing gum!*——How many chewers would that take? Why a million of them, if each one used fourteen rolls. It makes one's jaws ache to think of it. "But what of it? Where's the harm?" say you. We don't know what this gum is made of, it may contain pitch, tar, turpentine, and lumber, or it may all be pure spruce gum—but supposing the article itself to be clean, and not poisonous, it is not harmless. Every time it is pressed against the teeth, it acts like a sucker or air-pump, pulling and straining at the roots, and weakening their delicate nerves, so that very soon decay commences, toothache follows, and the tooth is lost.——The act of chewing makes the saliva (spittle) flow freely into the mouth, causing a person to keep spitting. This habit is filthy; and moreover, the saliva is all needed to aid the food to digest properly in the stomach. A few years of such waste will cause dyspepsia and other diseases. Again, when a boy thus forms the habit of chewing, he seldom stops with gum, but soon tries tobacco, and then good bye to a clean mouth, a sweet breath, good teeth, and——the favor of the ladies! Now John, out with your gum and tell your companions what we have told you, and see if your example will not induce them to give up the injurious practice.

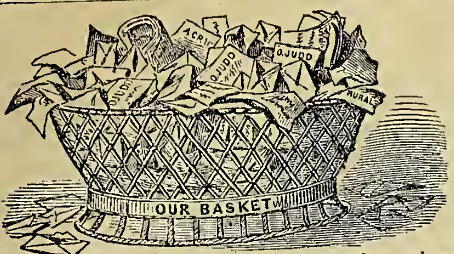
A QUESTION IN ARITHMETIC.

You who are old enough to use figures, may reckon how many dollars the above amount of chewing gum (14,000,000 rolls) costs at a cent a stick. How many whole farms of 100 acres each would it buy at $14 per acre? How many acres of land are the boys and girls chewing up. How many acres, reckoning the land at the Government price of a dollar and a quarter per acre?

WHICH WAS CAUGHT.

A friend communicates the following, which he says occurred when he was a boy. He had been fishing on the salt water, using for bait, large hard clams, which, you know, have strong jaws (shells), and very powerful muscles to hold them tight when closed. Two of these were brought home, and left in the basket, which was set in the kitchen for the night. About twelve o'clock, a great racket was heard around the house. Bump, bump, bump it went, as if some one was trying to crack a hard nut, or pound open a box. The family were quite alarmed, and ran to the kitchen to discover the cause. There, a large rat was running frantically around the room, with one of the clams fastened to his nose, which he was vainly trying to shake off. He had found the bivalve with his shell partly open, and tried to steal the savory meat within, when he was suddenly nipped, and could not escape, Of course, he was speedily killed—a warning to thieves, and to those who poke their noses into other people's concerns.

"Jimmy, do you go to school?"——"Yes Sir, to the school kept by Miss Post."——"Miss Post! not a whipping Post, I hope."——"O no, sir, a guide Post!"



Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

To Correspondents—Questions yet Unanswered.—Probably more letters of inquiry on practical topics are addressed to the *Agriculturist* than to any other periodical in the country. This is due not alone to the large and wide spread circulation of this journal, but especially to the fact that it is mainly devoted to those departments of labor, which involve an almost endless variety of details. How many questions are connected with the selection, breeding, rearing, and care of animals; so of the multitudinous field crops, fruits, garden vegetables, flowers, and household labors. Why, one man could ask more questions on these topics than ten of the wisest men could answer intelligently and thoroughly. What must be the result, then, when there are fifty thousand practical, thinking men, all reading the same journal? We have at this very moment not less than four or five hundred specific inquiries, embracing all sorts of agricultural and household subjects. Many of these we shall feel able to respond to promptly as we come to them. Many others will *each* require hours of thought, inquiry, and investigation. Thus, for example, in the first three letters taken at random, we read: "What is the comparative value of lime and unleached ashes from different kinds of wood?" "What is the Lapland Kale; will it grow here; where can the seed be obtained?" "What are the respective merits of the different farm mills before the public—and which would you recommend?" And perhaps the next three, five, ten, or a hundred letters, will contain similar queries. We could give an off-hand *opinion* on nearly all of these topics; but we trust our readers look for something more than this; they want only *well grounded* opinions—at least we are only willing to offer such; and so at the risk of losing an editor's reputation for *knowing* everything, we must, with the assistance of our associates, take up these topics as we can. We seldom throw aside any query of general interest, but keep every thing of this character until it becomes practicable to respond by a direct answer, or by a general article covering the ground. [There is not a number of the *Agriculturist* printed, in which there are not many single paragraphs that have each cost some one of the editors hours of investigation and thought. A single recent article (on sun-dials) has been on the writer's mind for a year or more, and he has written perhaps a score of letters, and examined thousands of pages of printed matter, to be able to write what may have appeared to the reader to have been a mere off-hand sketch. And the same may be said of many other articles.]

Questions upon Fruit Trees, etc.—Answers to many of these will be found scattered through the Calendar of Operations, on pages 98, 99, etc.

Trees Partly Buried.—J. B. Firth, Wayne Co., Mich. Where earth is raised about the trunks of large trees by grading or otherwise, they will sometimes live, and may be trimmed up to keep their proportions. In a majority of cases, it will be better to set new trees than to attempt raising the old ones.

Apples for Minnesota.—S. Schultz, Fillmore Co, Minn. Rhode Island Greening, Twenty Ounce Pippin, Ribston Pippin, Esopus Spitzenberg, and Yellow Belleflower, will probably succeed with you, and are desirable Winter apples; while Early Harvest, Gravenstein, Porter, and American Summer Pearmain, are good early and Autumn sorts. Perhaps other fine varieties *are known to succeed well* in your immediate vicinity. If so, plant them. Set the trees no deeper than they grew in the nursery, use the same earth dug out of the hole, if rich; if not, add a little compost, or introduce good soil, and set 30 feet apart for the general orchard.

Various Grapes—The best.—In response to the question on page 83 last month, Messrs. Bissell & Salter say: "We do recognize the descriptions, but not as belonging to our 'new and costly varieties'—in fact we have few varieties at any price, which answer the descriptions of those 'American grapes two centuries ago'; and of these the Erickson and Dartmouth are so nearly alike, as to be almost one and the same variety. The Charter Oak is another of these varieties; but we consider it utterly worthless—good for nothing. [So do we. ED.] The Northern Muscadine is one of the best Fox grapes, even better than the Perkins. But we recommend none of the Fox grapes as worthy of cultivation, except under peculiar circumstances, or for very early ripening, etc. We grow many vines, high-priced, low-priced, and fancy, simply because it is our business to supply what the market demands, but we would under no circumstances urge a man to buy a plant, because it is a high-priced kind. We do advise people to buy the Delaware, because it is good, and because every Horticultural Society in the U. S. has thus far placed it at the head of their several lists of hardy, native American grapes. A grape so unanimously recommended will bear urging.... We also recommend Diana, because it and the Concord are only surpassed by the Delaware".. [We place the Hartford Prolific nearly on a par with, or equal to the Concord. The Delaware, Diana, and Concord, or the Hartford Prolific, are good enough, and give variety enough for general cultivation.—ED.]

Arbor Vitæ for Hedges.—Alex. Rankin, Kansas. The Arbor Vitæ is planted for ornamental purposes, as a screen, and to shelter grounds, rather than to fence against stock. For the latter purpose, Buckthorn, Honey Locust, or Osage Orange are better.

Ground Hemlock (*Taxus baccata*).—H. Weaver, Hamilton, Pa. By your sketch and description of the evergreen shrub alluded to, it is recognized as that of the American Yew, usually called ground Hemlock. The shrub or bush is quite straggling in habit, not very common, nor of much beauty.

Patent Insect Powders.—I. Pearre, Frederic Co., Md. Various poisons will kill insects if properly applied. Mercurial ointment well rubbed into the back of every midge, weevil, and caterpillar would be a sure remedy—the difficulty is, to apply it. So of the greatly advertised insect powders.... One man has a patent bellows for projecting the powder forcibly upon the insects. A housekeeper would have quite a time of it, "puffing and blowing" through every crack where ants, cockroaches, and other vermin hide! We can not recommend any one of these insect powders.

To Destroy Moles.—Frederic F. Nuide, King George Co., Va., writes that moles may be destroyed by placing in their paths, pills made of a grain of calomel each, mixed with a little corn bread [Why not use arsenic or strychnine if it is desirable to destroy them.—ED.] He also states that in that section, the Castor Oil Plant or Palma Christi, (*Ricinus Communis*,) is grown in gardens with a belief that moles will not remain in the vicinity where it is raised.

That Nameless Plant.—"H." Biddeford, Me., writes that from the brief description of the plant noticed in the Jan. *Agriculturist*, page 19, he gives a Yankee guess that it is *Goodyera pubescens*, or *G. repens*, of the order Orchidaceæ. Mr. Ignatz Pilat, of the Central Park office in this city, also gives the latter name, *G. repens*. Referring to Gray's Manual, we find the description corresponds so nearly, that there is little doubt of the identity.

Planting Tansy around Peach Trees.—S. Huff, Phelps County, Mo., recommends this to keep worms off, and says he has tried it. It may be a partial remedy against some kinds of insects, but probably not many. The fact that *we* dislike the bitter tansy, is not a certain indication that any of the insect tribes shun it—their tastes are unlike ours.

Coal Tar a Preventive of Borers.—T. F. Jenkins, Orange County, N. Y., finds coal tar applied to the trunks of his fruit trees, for about a foot from the ground upwards, a sure preventive. This is, doubtless the case; but the tar applied direct, often injures the tree. It may be spread upon paper, and wound about the tree without danger. The paper itself is usually sufficient.

Buist's Flower Garden Directory.—F. A. Schultz, St. Louis Co., Mo. This book gives the botanical and most of the common names of flowers, with directions for culture. Good, for a small, practical work.

Barometers for Farmers.—L. Gibbs, Trumbull Co., Ohio. We believe a barometer one of the most useful things on a farm. Their cost, their liability to breakage, and the difficulty of adjusting them by unskillful persons, have prevented their introduction generally. We have recently examined an *aneroid* or spring barometer, now manufactured in this country, which dispenses with mercury, and is very convenient. It appears to be a very good instrument, and after a careful investigation of its accuracy and merits, we shall tell our readers more about it. We think it will be the instrument for common use.

Tar on Seed Corn.—J. B. Pease, of Stearns Co., Minn., asks how to use coal tar on corn, to prevent crows from pulling it. *Ans.*—Thin it with a little water so that the corn can be stirred around easily, then dry the corn with lime or ashes. Common tar is quite as good as coal or gas tar, though neither of them will always prevent hungry crows from pulling the plants. The tar and lime, or ashes, are good for the seed—crows or no crows.

Wrens.—What good do they do? O. W. True, a Maine boy, writes that, like most boys in a new country, he was brought up to believe the wren a naughty marauding bird, delighting in destroying eggs of other birds, and doing all manner of mischief, and that this, and indeed all kinds of birds, were lawful game for every gunner. He rightly thinks, that as soon as farmer boys are taught the real uses of any particular bird, they will become interested in its doings, and in its preservation, just as much as in any useful domestic animal. He suggests that some one entirely familiar with the habits, food, etc., of the wren, should give through the *Agriculturist* a brief account of them.

Artesian Wells—An Inquiry.—An item is going the rounds, to the effect that the deepest Artesian Well in the world is at Columbus, Ohio; that it is 2,300 feet deep; and that it is proposed to carry it still deeper if money can be raised. We would like to know the truth of this statement, and if true to also learn some particulars of the method of boring, size of the cavity, and any other particulars of interest. Perhaps some subscribers residing at or near Columbus, can give the information.

Deep Plowing—Planting Wheat.—Joseph Lynn, of St. Clair Co., Ill., says he may be getting insane, (as was hinted in a recent number of the *Agriculturist*,) but his insanity seems to pay, for his insane plowing, *deep and close*, last Spring, brought a much larger yield of corn and oats. He is so far gone, as to try planting wheat: that is, he last Fall plowed 10 acres 8 inches deep, using three horses abreast, and going twice in the furrow. He then marked it off in rows, and dropped the seed by hand—13 bushels on the 10 acres—covering it with a one-horse plow. It has made an excellent growth, and so far promises well. We shall be glad to hear the result at harvest.

Manure Questions—Bones.—These are so numerous, that we are compelled to refer inquirers to the chapters on Manure, now being published in this journal. That series of articles will, before it closes, probably answer every question yet asked, and many others. With regard to bones, we will here say briefly, to some two dozen questions before us, that where immediate effect is desired, they should be reduced to the finest powder. For fruit-trees and vines, where the effect is to be prolonged over many years, merely breaking them to convenient pieces will answer. On good soil, we use three to five barrels per acre for field culture, and twice as much in the garden. On poor soils a larger amount is needed. We use little other manure; bone saw-dust is the thing for us, no matter what the crop.

Manuring and Sub-soiling.—Shall we manure and sub-soil land the same year? C. and E. Chatfield, of Lincoln Co., Me. Certainly, stir the sub-soil well, and manure the surface soil; either operation only makes the other more effective.

Large Yield of Wheat.—R. B. Haviland, Cayuga Co., N. Y., raised last season 772 bushels of wheat on 18¾ acres, a little over 41 bushels per acre. The soil was a retentive clay but *thoroughly underdrained* with tile It was top-dressed with 4 bbls. of salt, and 5 bbls. plaster. We presume the ground was otherwise well manured, though no statement is given. The *draining* helped to do the business.

Peach Blow Potatoes.—Z. Colgrove, Warren Co., Pa. We know but one variety of the Peach Blow Potato; it may be slightly changed in appearance by difference in soils It is white fleshed, boiling somewhat dry and mealy, and has latterly been a favorite with many in this vicinity. Last season, however, it rotted about as badly as other varieties, and we fear it will not long retain its good name.

Internal breaking of an Egg.—A subscriber, who says he lately lost a valuable hen by the internal breaking of her egg. asks for information as to proper treatment, from some one who has had experience with such cases.

Sending Eggs by Express.—Mrs. J. C. Burbrige, Pike Co., Ill. The Poland fowl eggs might be obtained at the East, and if carefully packed and carried, some of them would probably hatch, but you would run considerable risk of being as badly off for chickens, as the milk-maid in the fable. Any one of those who advertise poultry in this journal, would doubtless be able to supply you with the eggs, or what would be better, with the fowls themselves. You might correspond with C. N. Bement, Poughkeepsie, N. Y., or Richard McCormick, jr., Woodhaven, Long Island, N.Y.

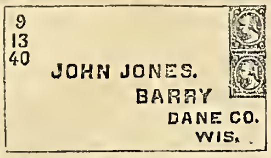
Making Sun Dials.—To many Inquirers. A plain description of the method of making these will be given after the Spring work is over—probably in June

Seeds for Free Distribution in 1860.

REVISED AND ABRIDGED CATALOGUE.

Every subscriber to the present volume, not having done so, is invited to select four or five parcels of seed from the list below. The seeds can be called for at the office, or sent by express, when for large clubs, or they will be forwarded by mail if post-paid envelopes are provided.

If to go by *mail*, the applicant must furnish *prepaid* envelopes, of ordinary size, prepared as here shown—that is: Put the figures corresponding to the Catalogue plainly on the upper left hand of the envelope, and put all the postage stamps upon the right side of the envelope—put one above the other, when two or more are needed, to prevent the seeds being crushed in the stamping process, in the Post-Office. One ordinary envelope will generally hold the amount of seed-packages carried by two or three stamps. ☞ *The amount of stamps can be calculated from the Catalogue. Single 1-cent stamps on letters are of no value, unless there be even threes of them, as letter postage is rated by the half ounce.*



N. B. For the Pacific coast, 10-cent stamps must be used where 3 cent stamps are named in the list. Letters to Canada need not necessarily be prepaid here. (If to be prepaid send coins, and not Canada Stamps.)

SEEDS STILL ON HAND.

[For Descriptive Notes upon these Seeds see pages 3 and 4 of January number.]

Field Seeds.

2—Improved King Philip Corn—Single, double, or triple packages, as may be desired, requiring one, two, or three 3-cent stamps.
3—Stowell's Sweet Corn—Same packages as No. 2.
94—Crystal Flint or Hominy Corn—Same as No. 2.
6—Ashcroft's Swedish Turnip—Half of 3-cent stamp.
7—River's Swedish Stubble Turnip— do. do.
98—Long Red Mangold Wurtzel—One 3-cent stamp.
101—Improved Long Orange Carrot—½ of a 3-cent stamp.

Vegetable or Garden Seeds.

8—Daniel O'Rourke Pea—Packages same as No. 2.
9—Champion of England Pea—One 3-cent stamp.
99—Prince Albert Pea— do. do.
57—Eugenie Pea— do. do.
58—Napoleon Pea— do. do.
12—Green Kohl Rabi—One-third of a 3-cent stamp.
13—Enfield Market Cabbage— do. do.
15—Mammoth Cabbage Lettuce— do. do.
100—Early Purple Cape Broccoli—do. do.
95—Hubbard Squash— do. do.
109—Mammoth Red Tomato— do. do.
72—Imported Brussels Sprouts— do. do.
76—Musk Melon— do. do.
77—Water Melon— do. do.
103—Sage— do. do.
104—Thyme— do. do.
105—Chili Red Pepper— do. do.
106—Sweet Marjoram— do. do.
17—Red Strap-Leaf Turnip—One-half of a 3-cent stamp.
74—Solid White Celery— do. do.
75—Green Curled Endive— do. do.
55—White Globe Onion— do do.
71—Long White French Turnip—One 3-cent stamp.
107—Giant Asparagus— do. do.

Flower, Fruit, and Ornamental Seeds.

89—Cotton Plant (2 kinds)—One 3-cent stamp.
90—Norway Spruce Seed—One-half of a 3-cent stamp.
91—Arbor Vitæ Seed— do. do.
111—Castor Oil Bean— do. do.
110—New-Rochelle Blackberry—½ of a-3cent-stamp.

On an average five or six of the following 27 varieties will go under a 3-cent stamp.

23—Mignonette.	80—Yellow Hawkweed.
25—Mixed Nastutiums.	84—African Marigold.
27—Extra Cockscomb.	85—Gaillardia, mixed.
30—Tassel Flower.	87—Coreopsis.
31—Chinese Pink.	114—Mixed Petunia.
33—Cypress Vine.	115—Mix. Dbl. Hollyhocks
34—China Asters, mixed.	116—Mourning Bride.
35—German Asters, mixed.	118—Bee Larkspur.
38—Sweet William.	121—Trumpet Creeper.
42—Foxglove.	122—M'd Canterbury Bells
47—Morning Glory, mixed.	123—Gilia nivalis.
49—Candytuft.	124—Whitlavia.
50—Schizanthus.	126—Centranthus.
78—Ageratum Mexicanum.	

The Premiums Still Open.

[FOR SPECIAL PREMIUMS SEE LAST PAGE.]

[The premiums below are offered for subscribers to Volume XIX of the *American Agriculturist* whenever received. Those having partial lists made up can complete them, and other new lists can still be formed.]

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.*

REMARKS.—*The premiums below, except No. IV, are all for* NEW SUBSCRIBERS ONLY, *as we can only afford to pay premiums for once on the same subscriber. But* ☞ *in making up any premium lists, two renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞ *Names need not all be at the same Post Office.*

Every person collecting names for premiums can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

Any premium will be paid as soon as the list for it is completed, if we have the duplicate lists to refer to.

Premium III.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary*. Price $6.50. It weighs 8½ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium IX.—Every person sending 14½ *new* subscribers at 80 cents each, (or 110 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines**, new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two years' use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia*, now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Price, $45.

[Premiums 13 to 18, for Mowing Machines, Plows, Cultivators, etc., are still open, but omitted to save space. For particulars see last month's paper.]

Premium XIX.—Books. Whenever desired, instead of other premiums, every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from C. M. Saxton & Co's Catalogue, to the amount of 10 cents for every subscriber, sent in at 80 cents each.

Business Notices.

☞ *Sixty Cents a Line of Space.*

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Agricultural Book Publishers, and Proprietors of the Horticulturist, 25 Park Row, New-York.

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Price $45 per ton, 2000 lbs. in bags 125 lbs. each—prepared by J. M. HUNTINGTON & CO.,
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Sold in New-York by the following Horticulturists Seedsmen, Florists, and dealers in Guanos:
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A fair trial on any crop, side by side with the *best* Peruvian Guano, is solicited.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Saturday Evening, March 17, 1860.

The leap-year day gained at the end of February, was counter-balanced by the general observance of Feb. 22 as a holiday, so that we have had but a short month's business since our last report; every day's business affects the aggregate of transactions of a month by about four per cent. As indicated by the tables below, there has been a material diminution in the receipts of Breadstuffs, notwithstanding the early opening of navigation on the Hudson River. The sales of Flour, Wheat, Corn, and Barley, have been heavier than those reported in our last, and the amount in the hands of receivers has been much reduced.... With a good inquiry, especially for the better grades, Wheat Flour has advanced. The demand has been mainly for home use. There is less disposition to purchase freely. The general opinion of buyers is that prices have reached the highest point Yet holders are very firm, and not inclined to force their supplies on the market....In Wheat, an important improvement has occurred. The demand has been animated, while sellers have offered their stocks reservedly. Winter Wheat—which is scarce—is now 15 to 20 cents per bushel dearer than four weeks ago. The rise in prices of Spring Wheat is not so great, but is still quite encouraging. This description is plenty; yet, as it is anticipated that the Spring and Summer receipts will be light, holders are not eager to sell. Millers have been the principal purchasers. Little has been bought by shippers, or by speculators.... Corn has arrived freely and prices have favored buyers. The demand has been fair ..Rye has been moderately dealt in at about former rates.... Barley has been in active request and has advanced .. Oats have been abundant and depressed... The transactions in Cotton have been moderate. Prices have declined ⅛ ct. per lb. It is now generally believed that the yield of the last crop will reach 4,500,000 bales. Large as such a result is, it will not yield more clean, desirable Cotton than is likely to be wanted. The proportion of low, poor staple and sandy Cotton now in stock is very great, and these qualities will be the first to experience any material decline... Hay has been in demand at steady prices. The receipts have been light.. Hops, Seeds and Rice have been less active, and have declined in value....A lively business has been transacted in Provisions. Hog products have been cheaper....Tobacco has attracted more attention at uniform quotations.....The movements in Wool have been unimportant, though prices have been reduced....The transactions in most other kinds of Produce have been restricted.

CURRENT WHOLESALE PRICES.

	Feb. 10.	March. 17.
FLOUR—Superf to Extra State	$5 00 @ 5 35	$5 25 @ 5 60
Superfine Western....	5 00 @ 5 10	5 25 @ 5 40
Extra Western..	5 30 @ 7 25	5 45 @ 7 50
Fancy to Extra Genesee......	5 45 @ 7 25	5 70 @ 7 50
Super. to Extra Southern.....	5 40 @ 7 25	6 10 @ 7 50
RYE FLOUR—Fine and Super	3 60 @ 4 40	3 60 @ 4 40
CORN MEAL....................	3 40 @ 4 15	3 55 @ 4 15
WHEAT—Canada White......	1 30 @ 1 45	1 50 @ 1 65
Western White	1 30 @ 1 50	1 50 @ 1 70
Southern White...............	1 45 @ 1 55	1 55 @ 1 70
All kinds of Red....	1 18 @ 1 30	1 22½ @ 1 50
CORN—Yellow..................	78 @ 79	76 @ 79
White..........	78 @ 79	75 @ 79
Mixed.....	70 @	77 @ 78
OATS—Western....	44 @ 45	43 @ 43½
State..........................	45 @ 46	43½ @ 44½
Southern......................	38 @ 41	38 @ 40
RYE............................	86 @ 87	85 @ 87
BARLEY	69 @ 86	75 @ 88
White Beans..................	1 00 @ 1 15	90 @ 1 12½
HAY, in bales, per 100 lbs......	93¾ @ 1 12½	87½ @ 1 12½
COTTON—Middlings, per lb....	11¼ @ 11⅝	11⅜ @ 11⅝
RICE, per 100 lbs...............	3 75 @ 4 50	3 50 @ 4 25
HOPS, crop of 1859 per lb......	9 @ 18	6 @ 15
PORK—Old Mess, per bbl.....	17 50 @	17 25 @ 17 35
Prime, old, per bbl	12 37 @ 12 50	12 50 @
BEEF—Repacked Mess........	9 00 @ 10 00	9 25 @ 10 50
Country mess	5 25 @ 5 50	5 25 @ 5 50
HOGS, Dressed corn, per lb ..	8 @ 9¼	8¼ @ 8½
Lard, in bbls. per lb...........	11 @ 11⅜	10¾ @ 11⅛
BUTTER—Western, per lb.....	11 @ 15	11 @ 15
State, per lb....................	14 @ 22	14 @ 21
CHEESE, per lb	9½ @ 11½	10 @ 13
EGGS—Fresh, per dozen......	18 @ 19	19 @ 20
POULTRY—Fowls, per lb..	10 @ 12	10 @ 13
Geese, per lb..................	8 @ 10	8 @ 10
Ducks, per lb	15 @ 17	13 @ 20
Turkeys, per lb.............. ...	11 @ 14	15 @ 18
Wild Pigeons, per doz.........		5 @ 6
Partridges, per pair...........		1 25 @ 1 50
Venison, carcass, per lb.......	5 @ 7	50 @ 75
FEATHERS, Live Geese per lb.	42 @ 48	42½ @ 50
SEED—Clover, per lb	8 @ 8¾	7¼ @ 8
Timothy, per bushel..	2 50 @ 3 25	3 00 @ 3 62½
SUGAR, Brown, per lb.........	6½ @ 8¾	6 @ 8¾
MOLASSES, New-Orleans, pr gl	44 @ 48	44 @ 49
COFFEE, Rio, per lb..........	11¼ @ 12¾	12 @ 14½
TOBACCO—Kentucky, &c. pr lb	4 @ 12½	4 @ 12½
Seed Leaf per lb..............	6 @ 25	6 @ 25
WOOL—Domestic fleece, per lb.	33 @ 60	34 @ 58
Domestic, pulled, per lb	20 @ 50	28 @ 48
HEMP—Undr'd Amer'n pr ton.	120 @ 150	120 @ 150
Dressed American, per ton....	160 @ 200	160 @ 200
TALLOW, per lb..	10¼ @ 10½	10½ @ 10¾
OIL CAKE, per ton......	32 50 @ 36 00	33 00 @ 36 50
APPLES—Dried, Per lb.......	6 @ 7¼	5 @ 7
Dried Peaches—pr lb. South'n	10 @ 15	10 @ 16
Dried Raspberries, per lb.....		18 @ 20
POTATOES—Mercers, p. bbl ...	1 07 @ 2 12	1 75 @ 2 12
Peach Blows, per bbl...... ...	1 50 @ 1 75	1 25 @ 1 75
Nova Scotia, per bushel.......		55 @ 60
CABBAGES, per 100....	3 00 @ 5 00	3 00 @ 5 00
ONIONS, Red, per bbl.........	1 75 @	2 25 @
White and Yellow, per bush...	2 00 @ 2 50	2 00 @ 3 25
TURNIPS, Rutabaga, per bbl..	1 12 @ 1 25	1 12 @
APPLES, Winter, per bbl......	2 75 @ 3 75	2 75 @ 4 00
CRANBERRIES, per bbl........	9 00 @ 13 00	10 00 @ 12 00

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 bus days *this* mon ,	67,819	4,212	195,813	6,915	39,965	62,933
26 bus. ds. *last* mon ,	92,468	21,752	300,487	7,046	61,157	72,370

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 business days *this* mon.,	295,040	325,950	445,100	44,150	211,500
26 business days *last* mon ,	241,463	139,000	371,000	45,600	205,600

Breadstuffs exported from N. Y., from Jan. 1 to March 14.

	1859.	1860.
Wheat Flour, bbls..........................	93,803	112,829
Rye Flour, bbls..........................	1,566	865
Corn Meal, bbls..........................	16,665	13,910
Wheat, bush..........................	17,349	117,925
Corn, bush..........................	31,383	78,975

The following is a statement of the exports of the principal kinds of Breadstuffs from the Atlantic ports of the United States since Sept. 1, 1859:

To Great Britain and Ireland.

From	To Date.	Flour, bbls.	Wheat, bu.	Corn, bu.
New-York....	Mar. 8, 1860	191,828	448,733	17,063
New-Orleans..	Mar. 1, 1860	8	——	5,025
Philadelphia..	Mar. 1, 1860	7,572	75,777	4,250
Baltimore.....	Mar. 1, 1860	——	——	——
Boston........	Mar. 1, 1860	733	——	——
Other Ports...	Mar. 1, 1860	15	5,527	——
Total from Sept. 1, 1859....		200,156	530,037	26,338
To about same period, 1858		85,758	415,800	319,452
To about same period, 1857		712.496	3,337,332	1,515,818
To about same period, 1856		682,066	6,739,339	3,249,414

To the Continent.

From	To Date	Flour, bbls.	Wheat, bu.	Corn, bu.
New-York....	Feb. 28, 1860	26.419	——	3,508
Other Ports...	Latest dates.	5,176	——	2,060

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been unusually well supplied with beeves during a month past. Receipts for four weeks just ended, 15,520 bullocks, or an average of 3,880 per week, against a weekly average for March 1859, of 3.322 head. Prices have ruled low, closing March 14th, about ¾c. per lb. estimated dressed weight lower than four weeks ago. Prices this week: Premium cattle 10½c.@11c. per lb. net weight; Prime 9½c.@10c.; Medium 8c.@9c; Poor 6c.@7c. with a general average for all sold of 8c.@8½c.

VEAL CALVES—As usual at this season receipts are on the increase. Receipts for four weeks just ended, 2,136 all of which sold readily at 6½c.@7c. per ℔ live weight for prime, with 7½c. for extras Common calves are worth 5c.@6c. per lb., and " bobs" $2@$2 50 each.

SHEEP AND LAMBS.—These continue to dwindle in numbers as the lambing and shearing season approaches. Receipts for past four weeks, only 22,680. The market is lively, especially for good stock. Prices; 6c.@7c. per ℔ live weight for prime to extra, and 5c.@6c. for common to fair. A few sheared sheep brought 5½c. It is quite too early to expose sheared sheep in this climate.

HOGS.—Receipts moderate during the past month, numbering 16,015. Prices have advanced a little. Corn hogs now sell at 6¼.@6½c. per ℔ live weight, and distillery hogs at 6c.@6½c. The demand is good.

The Weather for the month ending Mar. 17, has been variable, with touches both of Winter and Summer. The season has been unusually dry, and now the frost is out of the ground and farmers have commenced their outdoor labors. OUR DAILY NOTES condensed, read thus: *February* 18, heaviest snow storm of the season, making good sleighing—19, clear, cool and windy—20, 21, fine mild days—22, cloudy A. M. rain P. M.—23, heavy fog, then clear with showers P. M.—24, fine warm day—25, cloudy with snow squalls—26, 27, 28, clear and fine—29, fog and cloudy.—*March* 1, cloudy with fog—2, 3, 4, clear and warm—5, cooler—6, clear A. M. cloudy P. M. rain at night—7, fog and rain—8. rain—9, light snow A. M. clear and mild P. M.—10, fine A. M, cloudy P. M.—11, cloudy, with cold wind—12, light rain A. M. clear P. M.—13, cloudy, cool—14, clear—15, clear and summery—16, clear and fine—17, cloudy.

☞ For Thermometrical Notes see last page, (128).

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

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Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.

HAIGHT & EMENS, 226 Front-st., New-York.
Refers to the Editor American Agriculturist.
" E. R. Cooper, Cashier Market Bank, New-York.

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FOR

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of all kinds of Agricultural Books. Sent free

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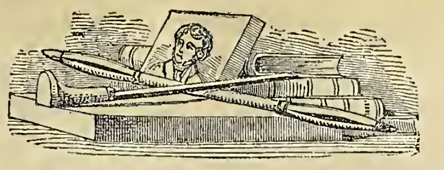

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Editor Tribune.

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LINNÆUS RHUBARB—(propagated exclusively from the roots,) at very low prices to the Trade and Market Gardeners.

DWARF PEAR TREES—Fine two year old trees of the best selected varieties, well branched—admirable for Garden planting.

REBECCA and DELAWARE, Diana, Concord, and Hartford Prolific Grape Vines.

NEW-ROCHELLE or LAWTON BLACKBERRY.

NEWMAN'S THORNLESS BLACKBERRY.—Also STRAWBERRIES, and other RASPBERRIES, &c.

We have a large stock of the above superior varieties and offer them to the Trade and Fruit Gardeners at very low prices. Circulars furnished on application. Address

H. C. FREEMAN, Ravenswood, L. I., near New-York.

All plants delivered at any part of New-York City free of charge.

JOSEPH E. MACOMBER, Wholesale Vegetable Seed raiser Portsmouth, R. I.

[ESTABLISHED IN 1798.]

BLOODGOOD NURSERIES.

FLUSHING, (Long Island,) N. Y.

KING & MURRAY,

(Successors to KING & RIPLEY.)

Respectfully call the attention of Tree Planters, Nurserymen, and Dealers, to their large and well grown stock of Fruit and Ornamental Trees, Flowering Shrubs and Plants, including all the standard and valuable new varieties, which they offer at MODERATE PRICES.

Fruit Trees, Etc.

APPLE, all good kinds, 2 to 6 years, in large quantity.
PEAR. Dwarf, 2 to 4 years, in large quantity.
PEAR, Standard, 3 to 6 years.
PLUM, PEACH, APRICOT, NECTARINE, CHERRY.
WALNUTS and FILBERTS.
CURRANTS and GOOSEBERRIES, of the best English and American varieties.
GRAPES, Improved hardy native, and exotic.
BLACKBERRY and RASPBERRY, of the various kinds.
STRAWBERRY, in great variety.
RHUBARB, Linnæus, Royal Albert, and Victoria.

Evergreen Trees.

NORWAY SPRUCE, 3 to 12 feet.
PINES and FIRS, in variety and sizes.
ARBOR VITÆ, American, 2 to 10 feet.
JUNIPERS, YEWS, RHODODENDRONS, and many others.

Deciduous Trees.

MAPLES, of all sorts, for Lawns and Avenues.
ELMS, LINDENS, OAKS, ASHES, BEECHES, and ALL OTHER TREES, both American and European, which are worthy of cultivation.

Orders sent to KING & MURRAY,
Flushing, Long Island, (N. Y.)

or to their office, 244 Pearl-st., New-York City, will be attended to with promptness, and *carefully* packed for transportation to any distant point.

N. B.—Trees delivered free of freight to Fulton Market Wharf, New-York City.

☞ PRICED CATALOGUES forwarded on application, personally, or by mail.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

A. SAUL, successor to the late A. J. DOWNING & Co., Has the pleasure of announcing to the patrons of this old establishment, and the public in general, that his stock of Fruit and Ornamental Trees, Shrubs, &c., for sale for the ensuing Spring Trade, is full and complete, and comprises every thing to be obtained in his line of business, viz:

A large Stock of Apple, Pear, Cherry, Plum, Peach, Apricot, Nectarine, and Quince Trees, 1 to 3 years from the bud, and are of superior quality and growth

Grape Vines, Native and Foreign, embracing all the new and rare varieties.

Gooseberries, Currants, Raspberries, Blackberries and Strawberries, of all the best proved new and old varieties.

Rhubarb and Asparagus Roots, do. do. do.

ORNAMENTAL TREES.

EVERGREENS.—A very large stock of Norway Spruce, of all sizes, from 1 to 5 feet; Balsam Fir; European Silver Fir; Austrian, Scotch, and White Pines; Hemlock and American Spruces; Arbor Vitæ; Junipers (in varieties) of all sizes, 1 to 5 feet high.

DECIDUOUS TREES of extra size for street planting and for giving immediate effect to Parks, Lawns, Cemeteries, &c., such as, Maples, (8 var's); Elms, (10 var's); Ash, (8 var's); Oaks, (6 var's); Horse chestnuts, Catalpas, Ailanthus, Larch, Tulip Trees, Negundo, Abele, Mountain Ash, Deciduous Cypress, Weeping Willows, American and European Lindens, &c.

FLOWERING SHRUBS, over 50 choice species and varieties.

ROSES, a large collection of Hybrid Perpetual, Hardy Garden and Moss, China, Bourbon, and Tea.

HEDGE PLANTS. 100 000 Osage Orange Plants of extra growth, 1 to 3 years old.

HEDGE PLANTS. American Arbor Vitæ for screens, &c.

The above stock is all of the best quality and growth, and will be sold on the most reasonable terms.

A new Catalogue will be ready about the middle of March, and will be sent to all applicants on enclosing a P. O stamp to prepay the same. A SAUL.

Highland Nurseries, Newburgh, Feb. 20th, 1860.

Walworth Nurseries.

Careful systematic effort, aided by much experience, directed to growing trees of superior quality; and extensive orchards now embracing 125 acres and 13,000 trees; furnishing a means of testing and comparing varieties; enable the proprietor to furnish trees of most desirable quality, as well as most profitable varieties for Orchard Culture. Large space is given to trees in the Nursery, thus rendering them *stocky* and *strong*.

A Dwarf Pear Orchard of over 3,000 trees, part of which are in successful bearing, has furnished much experience of great value to such as may wish to engage in that interesting department of fruit culture.

The present Nursery Stocks consist of a large and general assortment of Fruit and Ornamental Trees and Plants, while special attention is invited to his *large stock of Dwarf Pear Trees*, grown with special care, and thoroughly headed back so as to give them the best possible form for transplanting.

Trees packed in the best manner at moderate charge; Catalogues furnished on receipt of stamp. Also, Circular of *Yeoman's Fruit Bottles*. Terms advantageous to the buyer.

T. G. YEOMANS.

Walworth, Wayne Co, N. Y.

Osage Orange for Hedge Fences.

1 and 2 years old, $3 and $4 per 1000; $25 and $30 per 10,000.

RHUBARB or PIE PLANT, $5, $6, and $8 per 100, according to kind—lower by the 1000.

Catalogues of all the extensive departments of these well known nurseries, gratis—a one cent stamp for postage.

Germantown Nurseries, near Philadelphia

THOS. MEEHAN, Proprietor.

TO PLANTERS.

PARSONS & Co.

AT

FLUSHING, L. I., N. Y.,

In inviting attention to their stock, which is this season very large and of fine quality and vigorous growth, would remind planters that the soil and climate of Long Island are noted for producing thrifty, *well-ripened* wood: it is thus, that with the proper cultivation our trees have attained their reputation for hardiness and for uniformly succeeding when they receive the care to which all plants are entitled.

A member of our firm is now sending out from the nurseries of Europe the choice varieties of late introduction, and it continues to be our constant aim to present to admirers of fine fruit and beautiful vegetation, a selection worthy of careful examination.

Among the large variety we cultivate, we have only space to mention of

FRUIT TREES AND PLANTS

APPLE, fine trees, 3 to 5 years old.
PEAR, dwarf, in bearing state, and in large quantity.
PEAR, standard.
CHERRY, dwarf and standard.
PLUM, APRICOT, and NECTARINE.
PEACH, 1 and 2 years.
All the above can be furnished of suitable size and form for training on walls and for pot culture.
CURRANT, Versailles, Cherry, and other sorts.
MULBERRY, FIG, WALNUT and FILBERT.
GOOSEBERRY, American and English sorts.
BLACKBERRY, New Rochelle by the 1000.
GRAPE VINES of all the foreign sorts, strong and well grown in large pots, including the fine new kinds.
Our NATIVE GRAPES, embracing Concord, Delaware, Diana, Logan, &c., &c., are of very *thrifty* growth, and priced at moderate rates.
RASPBERRY, STRAWBERRY, RHUBARB, &c., &c.

Prices of Fruit Trees, Plants and Vines by the hundred and thousand at proportionately reduced rates.

TO OUR

EVERGREENS

we invite special attention. Among them are

NORWAY SPRUCE from 1 to 10 feet, and at low rates by the quantity,
ARBOR VITÆ, American, of many sizes for hedges.
" " Siberian, both small and large, and of very handsome form
PINES, including Excelsa, Cembra, and others.
JUNIPERS, Irish, Heath leaved, and others by the thousand.
RHODODENDRON, both seedling and worked.
YEW, Podocarpus, &c., &c.

All these, and many others, we offer at low rates at wholesale. Our list of

Deciduous Trees and Shrubs

embraces all that are cultivated for ornament, and of all the different sizes, whether for

THE GARDEN, THE LAWN, OR THE AVENUE

THE EXOTIC DEPARTMENT

contained in nine houses, is now especially rich in Orchids and other choice Stove Plants, as well as in the large variety of Green-house Plants.

Purchasers will find our Plants well grown, and priced at low rates.

ROSES—We cultivate in great variety, and from our mode of propagation, they are sure to thrive.

For particular lists, with prices, of the different classes of plants, we refer to Catalogues No. 1 and No. 2, which can be obtained by mail, or from J. B. Parsons, No 3 Nassau-street, New-York.

We ask the attention of

THE TRADE

to our collection of *new* and *rare* plants of various sizes, and suited both to nursery planting and immediate sale.

We can furnish a very large quantity of small plants at lower rates than they can be imported for. Our collectors are keeping us supplied with seeds from different quarters of the world.

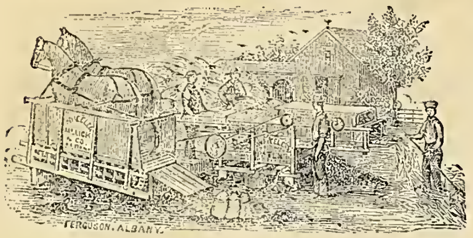
We will forward the Trade List upon application.

Orders will be filled with promptness and care, and packed for distant transportation. Goods delivered free of freight-charge upon Fulton-market wharf, New-York

WHEELER, MELICK & CO.,

PROPRIETORS

NEW-YORK STATE AGRICULTURAL WORKS.


FERGUSON, ALBANY.

[Double Power and combined thresher and winnower, at work.]

Manufacturers of Endless Chain Railway Horse Powers, and Farmers' and Planters' Machinery for Horse Power use, and owners of the Patents on, and principal makers of the following valuable Machines:

Wheeler's Patent Double Horse Power,

AND

IMPROVED COMBINED THRESHER AND WINNOWER.

[Shown in the cut.]

WHEELER'S IMPROVED PATENT COMBINED THRESHER AND WINNOWER, is a model of simplicity and compactness, and is made in the most substantial manner, so that its durability equals its efficiency and perfection of work. Its capacity, under ordinary circumstances, has been from 125 to 175 bushels of Wheat, and from 200 to 300 bushels of oats per day. It works all other kinds of grain equally well, and also threshes and cleans Rice, Clover, and Timothy Seed. Price, $245.

Wheeler's Patent Single Horse Power,

AND

OVERSHOT THRESHER WITH VIBRATING SEPARATOR.

Threshes from 75 to 100 bushels of Wheat, or twice as many Oats per day without changing horses—by a change nearly double the quantity may be threshed. Price, $128.

Wheeler's Patent Double Horse Power,

AND

OVERSHOT THRESHER WITH VIBRATING SEPARATOR.

Does double the work of the Single Machine, and is adapted to the wants of large and medium grain growers, and persons who make a business of threshing. Price, $160.

WHEELER'S NEW FOUR HORSE, OR SIX MULE HORSE POWER,

Is a recent invention, designed to meet the wants of Southern and Western customers. We believe it the simplest and most perfect Lever Power made. Price, $100.

Also, Circular and Cross-Cut Sawing Machines, Clover Hullers, Feed Cutters, Horse Rakes, and other Farming Machines.

☞ To persons wishing more information, and applying by mail, we will forward a Circular containing such details, as purchasers mostly want—and can refer to gentlemen having our Machines in every State and Territory.

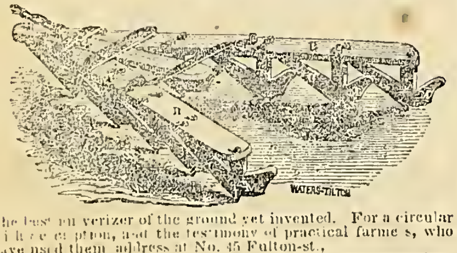
Our firm have been engaged in manufacturing this class of Agricultural Machinery 25 years, and have had longer, larger, and more extended and successful experience than any other house.

All our machines are warranted to give entire satisfaction, or may be returned at the expiration of a reasonable time for trial.

☞ Orders accompanied with satisfactory references, will be filled with promptness and fidelity; and Machines, securely packed, will be forwarded according to instructions, or by cheapest and best routes.

WHEELER, MELICK & CO., Albany, N. Y.

Share's Patent Coulter Harrow,



The best pulverizer of the ground yet invented. For a circular with description, and the testimony of practical farmers, who have used them address at No. 45 Fulton-st.,

TREDWELL & PELL, owners of the Patent for New-York City and vicinity, New-Jersey, Pennsylvania and other States.

SPECIAL NOTICE TO FARMERS,

No. 54 Vesey-st., New-York.

Farmers are most respectfully informed that

MAYHER'S AGRICULTURAL WAREHOUSE AND SEED STORE

is now located at No 54 VESEY STREET, near Washington Market, and on the North River side of the City, where may be found the LARGEST, BEST, AND MOST COMPLETE ASSORTMENT OF AGRICULTURAL IMPLEMENTS, MACHINERY AND SEED ever offered for sale in this city, and which we sell at

LOWER PRICES

than any house in the city. We manufacture all of our own Implements and Machines, and purchasers will find it to their interest to call on us and see for themselves. Catalogues furnished on application.

A. F. MAYHER & CO.,
Agricultural Implement Manufacturers.
No. 54 Vesey-street, New-York,
west side Broadway.

"Remember, it is No. 54 VESEY ST."

SHEEP'S TOES.

The best article for paring and cutting off Sheep's Toes is ROWE'S largest size PRUNING SHEARS

Salesroom 269 Pearl-st., New-York.

THE QUESTION SOLVED.

Cook's Improved Portable Sugar Evaporator

FOR MAKING SORGHUM & MAPLE SUGAR.

All doubts are dispelled! That Chinese Cane yields *true Cane Sugar* is a settled question. The difficulties in securing its granulation have been entirely overcome by the invention of Cook's Evaporator. By its peculiar arrangement it throws off all scum and feculencies, and secures a deposite of a kind of wax, which would otherwise prevent granulation, and WHICH HAS YET BEEN REMOVED BY NO OTHER PROCESS. Thus in this machine are combined all the requisites for *defecating without chemicals*, and evaporating with an unparalleled rapidity.

☞ Send in orders early, as multitudes were disappointed by waiting too long last year.

PUBLIC OPINION

"Operates admirably."—*Am. Agriculturist.*

"By it actual, veritable sugar is produced from the juice of the new saccharine plant, with certainty, expedition, and profit."—*Horace Greely, N. Y. Tribune, Feb.* 15, 1860.

"This is a very valuable invention."—*Scientific American.*

"The most successful of its class at the Fairs this season."—*Ohio Cultivator.*

"The working is beautiful, and an entire success."—*Cleveland Plaindealer.*

"It is to the Chinese cane, what the cotton gin is to cotton."—*Middlebury. Vt., Register.*

"A new source of wealth is thus opened for our farmers."—*Fort Wayne, Ind., Sentinel.*

"Was in full blast all day, and did its work to every one's satisfaction."—*Albany Evening Journal.*

From the Hon. John Sherman.

"I have no hesitation in recommending it as a valuable invention. The sugar and molasses are both of a superior quality, and cheaply and cleanly made. JOHN SHERMAN."

From Hon. Thos. H. Ford, Ex-Governor of Ohio.

Mansfield, O.

"I hereby certify that I exhibited samples of sugar made by D. M. Cook on his Evaporator at the Patent Office of the United States, in February last, and that upon examination and comparison, it was pronounced superior to any other.

THOMAS H. FORD.

"It combines the most valuable points ever developed in the manufacture of syrup or sugar."—*Milwaukee Democrat.*

"In its province the 'Excelsior.'"—*Chicago Herald.*

"It converted sugar cane juice into good syrup in the course of twenty to thirty minutes."—*Freeport Daily Journal.*

"The whole process is commenced and completed in the same Evaporator."—*Report Com. Illinois State Fair.*

"A more simple, economical, yet philosophical arrangement could not be devised for the purpose." *Report Ag. Soc., Addison Co., Vt.*

☞ CANE SEED AT A MODERATE PRICE WILL BE FURNISHED BY US.

All letters pertaining to Cook's Evaporator, or the sale of Territory, should be addressed to

BLYMYERS, BATES & DAY, Manufacturers,
Mansfield, Ohio.

THE DEEP BREAKING UP PLOW.

This Plow turns a furrow TWO FEET DEEP and of corresponding width.

When desired, the furrow can be deepened another foot with my new subsoil Trench Plow, thus turning up the soil *Three Feet deep.*

It is the *most suitable* Plow ever used for preparing the ground for Vineyards and Nurseries, or for any other crop requiring an extra deep tilth. It pulverizes the soil better, and leaves the ground in a finer condition than can be done by the spade, and at about *one fourth the expense*—thus making it a great labor-saving machine.

THE SUBSOIL TRENCH PLOW

Penetrates the soil from one to three feet deep as required.

THE DRAIN PLOW

For opening deep ditches for Tile or other drains.

THE ROCK PLOW

Turns out large stones or small rocks from either the surface or subsoil.

DEEP TILLERS.

These Plows are made to run from 12 to 20 inches deep as required.

THE GIBB'S PATENT CYLINDER PLOW

Is celebrated for its ease of draft and the wide furrow it turns.

POLISHED STEEL PLOWS

For Texas, California, and all other parts of the United States.

These are most suitable for clay and other adhesive soils, as they do not adhere to the mould board. They are light and strong, and of all sizes, from small one-horse to large four-horse.

All the above plows are new patterns, manufactured for this market exclusively by myself. They are remarkable for light draft and the perfection of their work.

In addition to the foregoing, I keep upwards of ONE HUNDRED AND FIFTY other kinds of Plows.

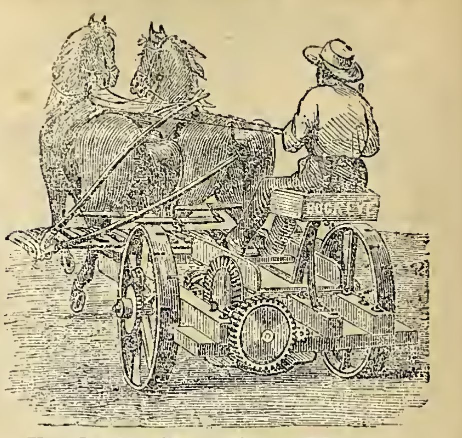
ALSO ALL OTHER AGRICULTURAL IMPLEMENTS.

HORTICULTURAL IMPLEMENTS—The largest and most complete assortment to be found in the United States.

FLOWER, FIELD, AND GARDEN SEEDS of all varieties.

GUANO, BONE DUST, POUDRETTE, and various other fertilizers.

R. L. ALLEN,
191 Water-st., New-York.



Buckeye Premium Mower,

WITH FOLDING BAR,

AWARDED FIRST PREMIUM GRAND GOLD MEDAL BY U. S. AGRICULTURAL SOCIETY, AT THE GREAT SYRACUSE FIELD TRIAL.

The attention of Farmers is invited to the "Buckeye" for 1860, which will combine all those features which have given it its present reputation, that of

THE BEST MOWING MACHINE IN THE WORLD,

in addition to several important improvements added the present season. The farmer intending to purchase a Mower will find it to his advantage to examine the Buckeye. The demand having considerably exceeded the supply for the past two seasons, farmers will avoid disappointment by sending their orders early in the season. Circulars forwarded on application, by mail or otherwise.

JOHN P. ADRIANCE,
165 Greenwich-st., near Courtlandt-st., New-York.

EXCELSIOR BURR STONE

Farm and Plantation Mill.

AGENCY NO 45 GOLD-ST., N. Y.

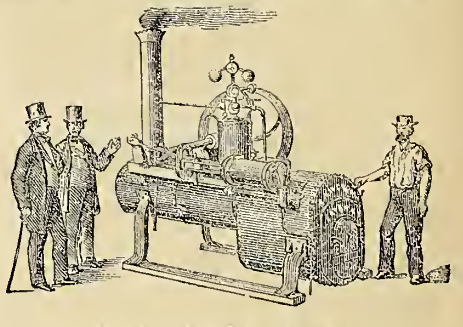
The experience of the past year has tested the value of the above invention, and proved that it is *the* Mill of the age, and best entitled to public confidence; that it is bound to supersede those now in use, on account of its intrinsic worth.

For hulling Buckwheat it is superior to all other inventions; and for grinding middlings, no other mill can compare with it.

One half the power required to run the ordinary Burr Stone Mill, will drive this, and at the same time do as much and as good work!

Descriptive circulars sent by

J. A. BENNET, Sole Agent,



A. N. WOOD & Co.,

Eaton, Madison County, New-York,

PRACTICAL MACHINISTS AND BUILDERS OF

The Celebrated Fuel Saving

Portable Steam Engines,

With Locomotive Boilers. These machines are unsurpassed for ECONOMY of FUEL, simplicity and strength; and are built of the best material. Address as above for a circular of information and recommendation

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NEW-YORK AGRICULTURAL IMPLEMENT,

Machine, and Seed Warehouse.

R. L. Allen, 191 Water-st., N. Y.

The attention of Farmers, Merchants, and all interested, is invited to my large and unequaled assortment of Agricultural and Horticultural Implements and Machines.—The greatest care in the selection of articles I offer for sale, to have them of the best and most approved patterns, and that they be made in the most substantial manner.

I particularly call attention to my superior Burr Stone and Iron Grain Mills, Horse-Powers, Threshers, Mowing and Reaping Machines, Saw Mills, Corn Shellers, Hay, Fodder, and Stalk Cutters, Presses, Pumps, Brick Machines, Carts and Wagons, Cotton Sweeps, Cultivators, Harrows, Plows of every variety, Garden Tools, &c.

FERTILIZERS—Peruvian Guano, Bone Dust, Phosphate of Lime, Dried Blood and Wool, Plaster, &c.

Orders solicited for the above, and for STEAM ENGINES and MACHINERY OF ALL KINDS, which shall receive prompt attention, and be filled on our best terms.

AGRICULTURAL AND HORTICULTURAL IMPLEMENTS, the latest improved.

FIELD and GARDEN SEEDS, from the most reliable growers, warranted pure.

No. 1 PERUVIAN GUANO.
SUPERPHOSPHATE OF LIME.
BLOOD AND WOOL MANURE.
BONE DUST, LAND PLASTER.
POUDRETTE &c.

Sold by GRIFFING, BROTHER & CO.,
60 Cortlandt-st., New York.

Excelsior Agricultural Works,
Albany, N. Y.
CHARLES E. PEASE, Proprietor.

(Successor to RICHARD H. PEASE.)

Farmers and Dealers in Agricultural Machines will find it to their interest to patronize this establishment, where they can be supplied with the very best.

ENDLESS CHAIN HORSE POWERS, for one or two horses; Lever or Sweep Horse Powers; Improved Threshers and Separators and Cleaners; Circular Saw Mills for cord wood; Cross Cut Saw Mills for cross cutting lumber; Krauser's Patent and Philo's Cider Mills; Corn Shellers; Clover Hullers; Dog Powers for churning, &c., &c.; Wilson's Patent Telegraph Fodder Cutters, &c., &c.

Manufacturing none but the most approved Implements that have been thoroughly and practically tested, I am enabled to give a most liberal warranty on all my implements, knowing that they can not but work as represented. I have just received the first premium at the NEW-YORK STATE FAIR, held here October 4th to 7th, for the best, most durable, useful and cheapest

AGRICULTURAL MACHINES

on exhibition. Orders will receive prompt attention, and Circulars sent gratis on application. Address

CHARLES E. PEASE,
Excelsior Ag. Works,
Albany, N. Y.
Jan. 1 1860.

ALBANY TILE WORKS. Corner Clinton-avenue and Knox-st., Albany, N. Y.—The subscribers, being the most extensive manufacturers of

DRAINING TILE

in the United States, have on hand, in large or small quantities, for Land Draining. Round, Sole and Horse Shoe Tile, warranted superior to any made in this country, hard-burned, and over one foot in length.

Orders solicited.
Price list sent on application

C. & W. McCAMMON,
Albany, N. Y.

DRAIN TILE MACHINE for making Tile for underground draining. Both hand and power machines constantly on hand by A. LaTourrette, Waterloo, N. Y.

PEOPLE'S MILL, OR A PRACTICAL Farm and Plantation Mill. Complete, Price, $40. Economical, portable, and durable, requiring only two horse power to work it. Can be used for grinding all kinds of grain, or chopping feed. Call and examine one in use at our office, we warrant the mill fully. M. C. CHADWICK & CO.,
17 Spruce-st, New-York.

P. S.—Also, The IRON AMALGAM BELL, costing only one third as much as Brass Composition.

HAY—HAY—HAY.

INGERSOLL'S IMPROVED PORTABLE HAY PRESS, for packing *Hay, Cotton, Rags, Hemp, Broom Corn*, &c., &c., 700 of these machines having been sold during the last three years, letters from every State in the Union testify to their *superiority, convenience* and *economy*.

Price. *Hay Press No.* 1, $50; wt. of bale 150 to 200 lbs. No. 2 $75; wt. of bale 250 to 300 lbs. Cotton Press, $150. Any sizes and for any purpose of packing, made to order and delivered on shipboard in New-York. Address for Circulars or Machines FARMERS MANUF'G CO., Greenpoint, Kings Co., N. Y.

WETHERSFIELD SEED SOWER.—Described in March number of Agriculturist. Price $6. For sale by R. L. ALLEN, 191 Water-st, New-York.

SOMETHING NEW.
B. T. BABBITT'S
BEST MEDICINAL SALERATUS.

68 AND 70	Is manufactured from common salt, and is prepared entirely different from other Saleratus. All the deleterious matter extracted in such a manner as to produce Bread, Biscuit, and all kinds of Cake, without containing a particle of Saleratus when the Bread or Cake is baked; thereby producing wholesome results. Every particle of Saleratus is turned to gas and passes through the Bread or Biscuit while baking; consequently nothing remains but common Salt, Water and Flour. You will readily perceive by the	68 AND 70
68 AND 70	taste of this Saleratus, that it is entirely different from other Saleratus. It is packed in one pound papers, each wrapper branded, "B. T. Babbitt's Best Medicinal Saleratus;" also, picture, twisted loaf of bread, with a glass of effervescing water on the top. When you purchase one paper you should preserve the wrapper, and be particular to get the next exactly like the first—brand as above.	68 AND 70
68 AND 70	Full directions for making Bread with this Saleratus and Sour Milk or Cream Tartar, will accompany each package; also, directions for making all kinds of Pastry; also, for making Soda Water and Seidlitz Powders. **MAKE YOUR OWN SOAP** WITH **B. T. BABBITT'S**	68 AND 70
68 AND 70	**PURE CONCENTRATED POTASH.** Warranted double the strength of ordinary Potash; put up in cans—1 lb., 2 lbs., 3 lbs., 6 lbs., and 12 lbs.—with full directions for making Hard and Soft Soap. Consumers will find this the cheapest Potash in market. Manufactured and for sale by B. T. BABBITT, Nos. 64, 65, 68, 70, 72 & 74 Washington-st, N.Y. and No. 38 India-st, Boston.	68 AND 70

BROWN'S BRONCHIAL TROCHES

Brown's Bronchial Troches.
COUGHS.

The great and sudden changes of our climate, are fruitful sources of *Pulmonary and Bronchial Affections*. Experience having proved that simple remedies often act speedily and certainly when taken in the early stage of disease, recourse should at once be had to "*Brown's Bronchial Troches*," or Lozenges, let the Cold, Cough or Irritation of the Throat be ever so slight, as by this precaution a more serious attack may be effectually warded off.

BROWN'S	"That trouble in my Throat (for which the "*Troches*" is a specific) having made me often a	TROCHES.
BROWN'S	mere whisperer." N. P. WILLIS.	TROCHES.
BROWN'S	"I recommend their use to PUBLIC SPEAKERS." REV. E. H. CHAPIN.	TROCHES.
BROWN'S	"Have proved extremely serviceable for HOARSENESS." REV. H. W. BEECHER.	TROCHES.
BROWN'S	"Almost instant relief in the distressing labor of breathing pe-	TROCHES.
BROWN'S	culiar to ASTHMA." REV. A. C. EGGLESTON.	TROCHES.
BROWN'S	"Contain no Opium or anything injurious." DR. A. A. HAYES,	TROCHES.
BROWN'S	*Chemist, Boston.*	TROCHES.
BROWN'S	"A simple and pleasant combination for COUGHS, &c." DR. G. F. BIGELOW,	TROCHES.
BROWN'S	*Boston.* "Beneficial in BRONCHITIS." DR. J. F. W. LANE,	TROCHES.
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BROWN'S	REV. S. J. P. ANDERSON, *St. Louis.*	TROCHES,
BROWN'S	"I heartily unite in the above commendation." REV. M. SCHUYLER.	TROCHES.
BROWN'S	"EFFECTUAL in removing Hoarseness and Irritation of the	TROCHES.
BROWN'S	Throat, so common with SPEAKERS and SINGERS." Prof. M. STACY JOHNSON,	TROCHES.
BROWN'S	*La Grange, Ga* Teacher of Music, Southern	TROCHES.
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BROWN'S	with BRONCHIAL AFFECTION, producing Hoarseness and Cough.	TROCHES.
BROWN'S	The "*Troches*" are the only effectual remedy, giving power and clearness to the voice."	TROCHES.
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☞ *Cures Cough, Cold, Hoarseness and Influenza.*
Cures any Irritation or Soreness of the Throat.
Relieves the Hacking Cough in Consumption.
Relieves Bronchitis. Asthma and Catarrh.
Clears and gives strength to the voice of SINGERS.
Indispensable to PUBLIC SPEAKERS.
Soothing and simple, CHILDREN *can use them.*
As they assist Expectoration and relieve Hoarseness.

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"SAPONIFIER,"
THE READY FAMILY SOAP MAKER.

Cost of one pound Saponifier (in iron box)	25c.
4½ pounds of refuse kitchen grease, boiled about four hours, with the Saponifier, which would ordinarily be thrown away, or sold at one cent per pound, say	20c.
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Forty-five cents, therefore, is the whole cost of fifteen gallons of very superior soft soap, a perfect jelly.

TRY IT!!!

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SAPONIFIER,
OR
CONCENTRATED POTASH.

A new article for making Soap, warranted to make Soap without Lime, and with but little trouble. One pound will make 12 gallons of good strong Soft Soap. Manufactured and put up in 1, 2, and 4 lb cans, (in small lumps,) at the CHALLENGE CHEMICAL WORKS, New-York,
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To Farmers and Gardeners.

The subscribers offer for sale 60,000 barrels of poudrette, made by the Lodi Manufacturing Company, in lots to suit purchasers. This article is in the twentieth year of its introduction into this country, and has outlived fertilizers of every other description, for the following reasons:—

1st. It is made from the night soil of the City of New-York, by the L. M. Co., who have a capital of over $100,000 invested in the business, which is at risk should they make a bad article.

2d. For corn and vegetables it is the cheapest, neatest, and handiest manure in the world, it can be placed in direct contact with the seed, forces and ripens vegetation two weeks earlier, prevents the cut worm, *doubles* the *crop*, and is *without disagreeable odor*. Three dollars worth or two barrels is all sufficient to manure an acre of corn in the hill.

Price—1 bbl. $2—2 bbls. 3.50—5 bbls. $8, and over 6 barrels $1.50 per barrel, delivered free of cartage to vessel or railroad in New-York City.

A pamphlet containing every information, and certificates from farmers all over the United States, who have used it from two to seventeen years, will be sent free to any one applying for the same. GRIFFING BROTHERS & CO.,
North River Agricultural Warehouse, 60 Courtland-st, N. Y.

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We would call the attention of Guano Dealers, Planters, and Farmers to the article which we have on hand and for sale at

FORTY PER CENT LESS THAN PERUVIAN GUANO

and which we claim to be superior to any Guano or fertilizer ever imported or manufactured in this country. This Guano is imported by WM. H WEBB, of New-York, from Jarvis' & Baker's Islands, in the "South Pacific Ocean," and is sold genuine and pure as imported. It has been satisfactorily tested by many of our prominent Farmers, and analyzed by the most eminent and popular Agricultural Chemists, and found to contain (as will be seen by our circulars) a large per centage of *Bone Phosphate of Lime and Phosphoric Acid*, and other animal organic matter, yielding ammonia sufficient to produce immediate abundant crops, besides substantially enriching the soil. It can be freely used without danger of burning the seed or plant by coming in contact with it, as is the case with some other fertilizers; retaining a great degree of moisture, it causes the plant to grow in a healthy condition, and as experience has proved, *free of insects*. For orders in any quantity, (which will be promptly attended to,) or pamphlets containing full particulars of analyses and tests of farmers, apply to

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To Dealers in and Consumers of Fertilizers.

BEWARE of whom you purchase your FERTILIZERS. Second hand Guano Bags, with the Peruvian Government Stamp, are in demand, and are bringing extremely high prices, for the purpose of mixing Peruvian with worthless guano, and selling it for a pure article. We purchase our Guano direct from the Peruvian Government Agents, and can not therefore be imposed upon. Dealers and consumers supplied with the pure No. 1 Peruvian Guano at the lowest cash prices by

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To Horse Owners.

WELLING'S WORM, DIURETIC AND CONDITION POWDERS, made after veterinary physicians' recipes, are very efficacious when given to horses suffering from inflammation of the lungs, heaves, worms, surfeit, moulting, or when hide-bound. Testimonials from farmers, city railroad men, and other owners of horses, with directions for use, may be had on application to SAMUEL G. WELLING, Apothecary, New Rochelle, Westchester Co, N. Y. The trade supplied at $4 per dozen large boxes of 1 doz. doses each. Retail price 50c. per box

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Dried Blood and Wool Manure.

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SUPER-PHOSPHATE OF LIME,
BONE DUST.

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Pure ground bone for fertilizing purposes, superior to any in market. For sale by the manufacturers.
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Samples sent by express.

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A superb entire Colt, 4 years old June next, 15 hands, bright bay, beautiful in symmetry, and graceful in style of action. The above colt will stand, until sold, at the stable of the owner. C. C. PHELPS, Vernon, Oneida Co., N. Y.

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Berkshire Pigs from imported stock for sale, $10 p. pair, delivered in New-York. W. H. CLAY
Southside P. O., Staten Island, 82 Wall-st., New-York.

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EXTRA PREMIUMS.

AN EXCELLENT CHANCE TO OBTAIN CHOICE SEEDS FOR THIS SPRING, WITHOUT EXPENSE.

[The season for work is coming on, and our friends who have greatly favored us in sending forward new names, are soon to be actively engaged in their field and garden labors. Those who are making up lists for the premiums on page 122, will have time to complete them. But to reward all others who will, during the next few weeks, take a little time and trouble to talk over the merits of the *Agriculturist* with their neighbors, and obtain their subscriptions, we offer some extra seed premiums. To avoid confusion we use a number for each premium which has not been applied to any previous premium.]

N. B.—Of course only one of these or previous premiums can be given for the same name.

Premium 22.—To any person sending in *new* subscribers at $1 each, for the present volume of the *Agriculturist*, we will present as a premium for each new name, 15 parcels of seeds from the list on page 122. If to be sent by mail, we will ourselves pay postage to the amount of *twelve cents*. If packages are chosen on which the postage exceeds 12 cents for the whole, the recipient will need to provide for the excess of postage. *We will give the* 15 *parcels of seeds and pay* 12 *cents of the postage for each name.* **N. B.**—If the new names are in clubs, new or old, and *at club prices*, we will give the 15 parcels of seed for each, but can not afford to pay the postage. [The new subscriber can also have the usual 5 parcels of seeds, on furnishing the stamped envelopes.]

Premium 23.—To any person now sending a *new* subscriber, we will present a package containing from **400** to **500** seeds of the **New Rochelle Blackberry,** with instructions for cultivating. The seed will be sent post-paid by us. This will be a valuable premium, in localities where it is not practicable to obtain the plants. We have obtained a fine supply of pure fresh seed, at large cost. We are not aware that there is any other pure seed in the country.

Premium 24.—To any person now sending in a *new* subscriber we will present a *post-paid* parcel containing over **2000** seeds of the *Dwarf Broom Corn*, described on page 104, of this paper.

Premium 25.—We have a limited supply of seeds of some new and promising plants, recently forwarded to us by our agents in Europe. These we are putting up in papers, and making up parcels *containing one paper of each kind.* One of these parcels will be presented *post-paid* to any person now sending in a new subscriber and $1. As these seeds are new, we can not of course say what may be their value, but some of them will undoubtedly prove valuable, and those who get them now, will produce the first seed raised in this country. There will be in *each* parcel some of the following seeds:

127—New Red Turnip Beet.
128—Perfection Cabbage, described, "fine, early, large."
129—Waite's Improved Flat Dutch Cabbage, described as "not so large as the old variety, but more adapted for domestic purposes."
130—Great Eastern Pea.
131—Custard Marrow Squash.
132—Moss Curled Parsley.
133—Blackstone's Hybrid Turnip.
134—Shepherd's Hardy Early Cauliflower.
135—New Pink Celery.
136—Dwarf Crimson Nasturtium.

Additional papers of two or three other varieties of new seeds will be added to each parcel of the above. We have a variety to select from, but not enough of any one kind to say what extra sorts will be sent to any individual.

Premium 26—For Amateurs.—By special favor, and at large expense, we have obtained a small quantity of the seed of three hardy annuals which are now creating some interest in England, viz.: *Clarkia pulcherrima ; Schizanthus grandiflorus oculatus*, and *Heliophila cærulea stricta.* Those who have access to the English illustrated Horticultural Magazines probably know the beauty of these plants. A *small* parcel of each of these seeds will be presented post-paid to the first fifty or sixty persons sending us a new subscriber at $1 a year.

Publisher's Special Notices.

COMPLAINTS—DELAYED PREMIUMS—SEEDS BY EXPRESS—DEFECTIVE ENVELOPES, ETC.

A few complaints have reached us, which have been due to oversight on the part of subscribers. We gladly do all we can to rectify all mistakes if made by ourselves—and those made by others when in our power.

1. Some persons entitled to premiums, have not received them as promptly as desired, because they did not send *duplicate* lists of names at first, to be referred to in deciding upon their title to the premiums asked for. We have, therefore, had to wait until the names were posted from the Entry Books, and indexed for reference.

2. All seeds asked for by mail or express, have been dispatched, except as indicated in the next note. Any error will be rectified, or any loss by mail or otherwise will be replaced when we have the seeds. See page 122.

3. We have a drawer full of seed envelopes which were not properly prepared, through error on the part of the sender. Some have no address, or but part of address upon them. Others have the address but no numbers to indicate *what* seeds are wanted. If the following parties will indicate from our present seed list (page 122) what seeds they desire, we will forward them promptly in the envelopes now waiting: D. D. Lake, Pa.; J. Annable, R. I.; D. B. Higgins, Del.; E M. Watson, Miss.; J. Foster, Va.; F. Terry, L. I ; W J. Morgan, Ct.; A. Schleiser, Pa.; R. A. Baird, Mo ; B. Boydston, Pa ; E. R. Burlingame, Ct.; J. G. McMurray, Ind.; H. Erke, Ill.; H. Schroaten, Wis.; F. Eberle, Ark.; H. Young, Cal.; D. S Johnston, Geo.; C. E. Dubois, Wis.; H. Parker, N. H. (no P. O.) All seed envelopes are sent to our country seed rooms as soon as received, to be filled and mailed there ; and they should always be complete in themselves, with seed numbers all on them, and not on a separate slip of paper, or in a letter.

4. Several persons at a distance have asked for small parcels of seed by express, when this mode of conveyance would cost more than by mail. In several such cases we have sent them by mail and paid postage, trusting that those who get them thus, will refund the postage, or otherwise acknowledge the compliment, say by forwarding new subscribers.

◆

Thermometer at 7 A. M., New-York.

[We purpose to present hereafter, a daily report of the temperature at 7 o'clock A. M. The observations are carefully made upon a standard Thermometer (Fahrenheit. *s* indicates snow ; *r* rain.]

JANUARY, 1860.

1...... 6°	8......36	15......34	22......35	28.....22
2...... 7	9......33	16......34	23......37	30.....38
3.. ..12	10. 36	17......34	24..... 32	31.....41*s*
4......24*s*	11......35	18......29	25......46	——
5......12	12......32*s*	19......32	26......34*s*	893
6......12	13......28	20......30	27......23	A'erage 29
7......29*r*	14......26*r*	21......38	28......24	

FEBRUARY.

1......10*s*	7......40	13......30*r*	19......19	25.....28*s*
2...... 5	8......30	14......41	20......18	26.....28
3..... 8	9 29	15......26	21......30	27.....33
4. ....23*s*	10......22	16......28*s*	22......35*r*	28.....41
5......22	11......16*s*	17......12	23......49	29.....36
6......42*r*	12......23	18..... 18*s*	24......41	A'erage 27

MARCH.

1......47*r*	4......46	7......38*r*	10......31	13.... 34
2......50	5......34	8......38*r*	11..... 31	14.....34
3......39*r*	6... ..44	9......34*s*	12......37*r*	15.....33

American Agriculturist.

(DISTINCT ENGLISH AND GERMAN EDITIONS.)

A THOROUGH GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS ; ORCHARD and GARDEN FRUITS ; GARDEN VEGETABLES and FLOWERS ; TREES, PLANTS, and FLOWERS for the LAWN or YARD ; IN-DOOR and OUT DOOR work around the DWELLING ; care of DOMESTIC ANIMALS &c &c.

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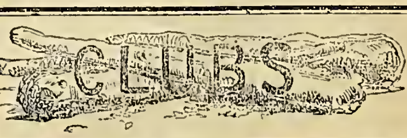

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ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN.—WASHINGTON.

ORANGE JUDD, A. M., EDITOR AND PROPRIETOR.

ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE. SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 5. NEW-YORK, MAY, 1860. [NEW SERIES—No. 160

☞**Office at 189 Water-st.,** (Near Fulton-st.)
☞**Contents, Terms, &c., on pages 156-60.**

Entered according to Act of Congress in the year 1860, by ORANGE JUDD, in the Clerk's Office of the District Court of the United States for the Southern District of New-York. ☞**N. B.**—Every Journal is invited freely to copy any and all desirable articles, if each article or illustration copied be duly accredited to the *American Agriculturist*. ORANGE JUDD, Proprietor.

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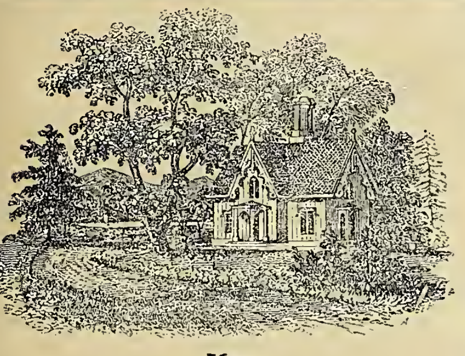
The **AMERICAN AGRICULTURIST** is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs.



May.

At length the finished garden to the view
Its vistas opens, and its alleys green.
Snatched through the verdant maze the hurried eye
Distracted wanders; now the bowery walk
Of covert close, where scarce a speck of day
Falls on the lengthened gloom, protracted sweeps,
Now meets the bending sky, the river now
Dimpling along, the breezy ruffled lake,
The forest darkening round, the glittering spire,
The ethereal mountain, and the distant main.—THOMSON.

The genius of gardening was very late in descending upon our shores, and, even now, has made no very decided impression upon American landscapes. Horticultural societies are of modern origin, and it is only within a score of years that the public has taken any marked interest in gardening as an art. It is far from being popularized now, though every year witnesses an increased interest in the cultivation and adornment of the grounds around dwellings, and finer horticultural products at our Summer and Fall exhibitions. In many parts of the land, one may travel for days if he will keep clear of the steamers and railways, without seeing any evidence that horticultural societies are known, or that papers which treat of gardening are published. There is no artificial arrangement of the grounds about the dwellings, no planting of trees by the wayside, no fruit yard, and nothing beyond a few square rods devoted to cabbages, peas, beans, and cucumbers, that has the name of a garden.

In the cities and villages, and their suburbs, and along the lines of our great thoroughfares, the evidences of horticultural taste are numerous. We see not only beautiful dwellings, villas and cottages, but appropriate ornamental grounds around them, like precious stones in their settings of gold. One has only to pass up the Hudson, or the East river at this season of the year, to see that the Genius of gardening has been domiciled among us. The cities of New-York, Philadelphia, and Boston, to say nothing of smaller places, are surrounded with a net-work of country residences where the landscape gardener has applied his skill. There are, no doubt, many examples of bad taste, both in the architects, and in the gardeners, but taken as a whole, these suburbs are a credit to the horticulture of the country. For twenty miles around Boston, in all directions upon the land, you will find little else, than thrifty homes, however small, still surrounded with fruit and ornamental trees, adorned with flower borders and shrubbery, luxuriating in strawberries, and in the clusters of the vine. Owing to the superior attractions of the scenery around our bay, and our facilities for water communication, our cultivated homesteads are more widely scattered. Downing has left his footprints all along our noble river, on both its banks, and his memory will be kept fresh and green, while the grounds he laid out and the trees he planted are preserved.

But the mass of our people have neglected the garden and have no taste for its delightful employments. The farmers, as a class, are often found to be behind the shop-keeper, and the mechanic, in horticultural skill. The unrest of our rural population, kept alive by the spirit of emigration, has been exceedingly unfavorable to gardening. The garden implies a fixed abode, and is one of the strongest influences to foster the love of home, and to hallow one spot of earth

Our hearts go out spontaneously to the garden, as these gladsome days return. The esthetic nature of man craves communion with flowers.

> "Along these blushing borders bright with dew,
> And in your mingled wilderness of flowers,
> Fair handed Spring unbosoms every grace,
> Throws out the snow drop, and the crocus first,
> The daisy primrose, violet darkly blue,
> And polyanthus of unnumbered dyes,
> And full ranunculus of glowing red.
> Then comes the tulip race, where Beauty plays
> Her idle freaks; from family diffused
> To family, as flies the father dust,
> The varied colors run; and while they break
> On the charmed eye, the exulting florist marks,
> With secret pride the wonders of his hand.
> Infinite numbers, delicacies, smells,
> With hues on hues, expression can not paint
> The breath of Nature, and her endless bloom."

We doubt if any means of educating and refining the taste of children is more potent than the flower garden. There is cultivation of mind and heart in the care of these beautiful plants. We know that many despise the flower border because there is no pecuniary profit in it. They can understand the language of clover heads, and red top, of the spikes of maize and the potato vines, for these products of the soil will sell in the market. "But what is the use," say they, "of your pinks and roses, jonquils and tulips. They look well enough, but wont fetch a red cent."

And it is because they look well enough, that we would have flowers around every farmer's home. Pray, what has the Creator given us eyes for, and a sense of the beautiful, if they are not to be gratified? Roses are certainly more beautiful than red cents, and, if they have the opportunity, the hearts of our children will go out after them more spontaneously. No wise father will grudge the labor and expense necessary to form these cheap bonds of virtue around his home. The seeds of the annual flowers are purchased for a trifle, and the bulbs, and roots, and shrubs, in this age of nurseries, are within the reach of most thriving farmers. Make a beginning this Spring, and let your son, when he goes forth to seek his fortune in the world, have occasion to remember "his mother's rose bush." While that is striking its roots, his heart will go down into the soil of his birth place, with a depth and fervor of attachment that new scenes will never eradicate. While flowers bloom, the picture of his early home will grow brighter in memory.

But if we submit the garden to the test of utility, we have the strongest inducements to cultivate it. It is a school of industry for both boys and girls, forming habits of systematic labor, and making work attractive by the pleasures that accompany it. Almost any child will dig in the soil for the sake of beautiful flowers, and fine fruits. These habits formed in our early years, abide with us. They lay the foundations of character, and are worth more than gold. The boy that learns to love work under ten years of age, has a fortune in that habit, useful for all after life.

The garden is not to be despised, as a means of family support and comfort, and of profit as well.

> "And see, my friends, this garden's little bound,
> So small the wants of nature, well supplies
> Our board with plenty; roots or wholesome pulse,
> Or herbs, or flavored fruits; and from the stream
> The hand of moderation fills a cup,
> To thirst delicious. Hence, nor fevers rise,
> Nor surfeits, nor the boiling blood, inflamed
> With turbid violence, the veins distends."

A family of the average size may have half its table expenses met by a well cultivated garden. Here is asparagus, pie plant, lettuce and other salads already in profusion. A little further on in the season, the ground grows red with strawberries, and all the smaller fruits hang temptingly from the boughs. Here are peas, beans, and green corn, beets, onions, and tomatoes, okra, egg plant and celery, squashes, melons, and the larger fruits of Autumn. It were a long catalogue that embraced all the delicious vegetables and fruits that a well appointed garden produces. There is health as well as economy in the cultivation of these articles. There can be no doubt that, as a nation, we live far too largely upon meat. Were fruits and vegetables as common as they ought to be upon the farm, this evil would be remedied. Children and almost all adults of unperverted tastes prefer a large proportion of this diet; and it is owing mainly to the fact that gardens are neglected, that salt junk and johnny-cakes, hog and hominy, reign supreme upon so many tables, for the larger part of the year. Consecrate a few square rods to the spade and the garden rake, and let Flora and Pomona henceforth be numbered among your household gods.

Calendar of Operations for May, 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

Explanations.—*f* indicates the *first*; *m* the *middle*; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

The fields, which so long wore a cheerless russet hue have now fully assumed their lively green vesture, or where the newly turned furrows follow the plow of the busy cultivator, the clean rich soil gladdens the heart with its freshness. Many in favored locations have already completed sowing Spring grain, and are hastening to prepare the corn fields for planting. Those who have deferred putting in oats or other grain because the seed bed could not yet be made mellow and warm, have done wisely. A young plant firmly rooted by favorable conditions at the first, has good promise of subsequent thrift, while a stinted growth in wet and lumpy soil is with difficulty improved by any subsequent care. Happy the men who have learned the value of draining and subsoiling, and need not to wait for the water to slowly find its way from the surface through the compact soil.

Stock should not be neglected during the press of business this month. The first few weeks after bringing forth their young is a trying season with them, and they should have corresponding care. In all cases it is easier to prevent their degenerating than to recruit them when low in flesh.

Bees are winging their way over the neighborhood, exploring every corner for their stores. Ample directions for their management are given under the head "Apiary" on another page.

Beans are worthy of attention as a field crop. They derive a large portion of their nourishment from the air, and will produce well where corn would fail. Plant, f, m, or as soon as all danger from frosts is past—they are too tender to bear severe weather. Cultivate bush varieties in rows two and a half feet apart. Limas and others usually grown on poles may also be put in drills and supported on wire trellises. Some claim that they yield better when trained horizontally, on leaders not more than five or six feet high. In planting, cover lightly, say one half to three fourths of an inch.

Broom Corn—Plant, f, to m, in hills three feet apart each way, or if in drills make the rows four feet distant, and when fairly up, thin to eight inches in the row. The dwarf variety described in last No., page 104, may be drilled closer, say in rows three feet apart.

Buildings—If any are to be painted this season, it is better done now than during the Summer, when the hot sun dries it too rapidly. Fall painting is preferable where it can be done. In erecting new outbuildings, provide for the introduction of water under cover for stock, and ample accommodations for stabling, and for the manufacture and preservation of manure.

Cabbages are a profitable crop when grown near enough to large towns to be marketed readily. Plant out, ff, m, from hot-beds in heavily manured mellow ground, for earlier crop, if not done in April. Examine roots of growing plants for cut worm. For late crop, sow, ll, in drills for future transplantings.

Calves kept for stock, will pay well for liberal feeding. Give plenty of milk with oatmeal or shorts. Let any change of diet be made gradually, to avoid diarrhea. Castration is most safely performed when the animal is about a month old.

Carrots—Try a small plot, if not already put in as directed last month. Horses and cattle will all take them gratefully when given with dry feed next Winter. With proper cultivation a very large yield of food per acre can be thus secured.

Cattle are mostly turned to the pastures. Allow them fodder still, if the grass is insufficient. Continue to give wet bran and shorts to milch cows until green food is abundant. It is better to keep working cattle stabled and feed them plenty of grain and roots with hay, rather than turn them out during the heavy labors of the season.

Cellars—Keep well ventilated and free from all decaying matter. A flooring of hydraulic cement excludes dampness from the ground, gives a level surface, is less infested by rats, and affords a cool place of deposit for butter, meat, etc., in Summer.

Clover may still be sown on Winter grain, ff. Where wanted for plowing in green to enrich the soil, f, to m, will be seasonable. For this purpose seed liberally, say eight to ten quarts per acre. See last month.

Corn gains nothing by haste in planting. Many cultivators turn over the sod early, and leave it until the grass roots have started; then, when the ground is warm and the weather settled, the field is well harrowed, which checks the growth of grass and weeds and renders the after cultivation easier. Marking out the rows should be done with a very light plow, or better, with a marker made of a strip of scantling with pins set at the right distance for the rows, and two handles like a plow to guide it. The whiffletree can be attached by two trace chains passing to staples near the ends of the scantling. Deep furrows to receive the seed remain wet a long time if much rain falls, injuring the young grain or even preventing germination. The use of the marker obviates this difficulty; where stable manure is used in the hill, a light furrow is needed. Use no Peruvian Guano in the hill unless mixed with a large quantity of earth, plaster, or muck.

Draining—Read suggestions in Calendar of last month. It is always in order when there are heavy compact soils requiring amelioration.

Economy on the farm does not consist merely in spending little and living close, but in turning every thing to the best account. The early morning hours are most valuable for labor—turn out from the bed in the house to the beds in the garden, and wake up the plants there. Remember that the master's eye can do more work than both his hands, and leave no part of farm operations to be done without your oversight. Hire good hands, give good wages and require good work.

Fences not now in order, are teaching cattle to be unruly. Five rails high in Spring are better than six after stock have learned to jump or throw down fences. Frequently take a survey of every part of the enclosures, that all may be kept safe. A little care in this particular may prevent the loss of a cow by breaking into a green clover field, or the rooting up of the garden by a drove of hogs.

Flax and Hemp should be sown, ff, m.

Grain Fields—Allow no stock to enter upon those sown last month, or the Winter grain. Now is a favorable time to pull out dock, cockle, Canada thistles and other foul weeds that will injure the growth and depreciate the value of the grain. Choose a day immediately after a rain when they can be drawn out easily. Unless the ground is in good heart, sow on guano, lime, or wood ashes.

Grass Seed—Sow, ff, upon grain fields not already seeded. It is safer done in April. Many prefer from the middle of August to the last of September for seeding to grass, and find it pays to put on the seed alone, instead of with grain as is so generally done. To ensure a good catch, make the land rich.

Hedge rows, if neglected, are sending up their new shoots to encroach still more upon the fields. If they can not be rooted out now, cut the tops and turn in sheep to eat off the young growth —Get rid of them in some way both in the fields and by the roadsides.—The grain lots are often well seeded with thistles and other noxious weeds from a neglected patch in the road, which it was nobody's business to extirpate.

Hired help will be more profitable if well treated, and made to feel an interest in their labor. Provide good fare, allow ample rests, be kind and cheerful with them, but firm in requiring faithful performance; a word of praise now and then will accomplish much more than any amount of *jawing*.

Hoeing will be necessary before the close of the month. Where the land is smooth enough to allow it, try cultivating with the horse hoe. Keep the ground well stirred between the corn rows, and allow weeds or grass no foothold. Prevention is easier than cure.

Horses are still paying for good care, by their daily labor. Follow directions of last month.

Hungarian Millet—Sow, ff, m, to raise seed; m, to l, for soiling. For hay, to be cut when in blossom, it may be sown as late as June. Use from 16 to 20 quarts of seed per acre, on well manured land, prepared as for grass seed, and cover with the bush harrow.

Lucern—Sow, ff, m. It requires deep soil with open subsoil, into which the roots penetrate very deeply. Being perennial it is valuable for feed, where it will succeed, as it can be cut two or three times in a season. Use 10 to 12 quarts of seed per acre.

Manures properly prepared, are plant-food. The greater the quantity manufactured and properly used, the more abundant the return from the land. Every decaying animal and vegetable substance on the farm furnishes a supply. Weeds from the garden and the roadside, leaves from the forest, muck from swamps and sods from plowed ground mixed with droppings of animals, or saturated with yard washings, will, if spread on the fields, be worked up into corn, oats, potatoes, etc. Enriching the land enriches the cultivator. Save, make, and use all that can be made available.

Meadows—Keep out all stock. Top dress with fine compost, plaster, wood ashes or Peruvian guano. Open sluiceways from the roadside, and allow the wash to spread and fertilize as much surface as possible.

Onions may still be put in, ff, according to directions of last month.

Peas for feeding out may be sown, ff, with oats to give partial support to the vines. For table use we have raised green peas satisfactorily in potato hills, the potato vines answering for bushes.

Plowing—Much labor in after culture will be saved by thorough plowing of corn ground. See that the sods are well laid over, otherwise the grass will give much trouble. Keep the plow out of wet lands until dry enough to turn up without leaving hard lumps, which will be almost as useless as stones throughout the season. Continue to deepen the soil by more thorough tillage. Subsoiling may often be cheaply done by following in each furrow with a light one horse plow.

Potatoes—Plant, ff, if delayed until now. Peach Blows, Carters, Prince Alberts, Mercers, Dykman and Davis Seedlings, are favorites in this vicinity, but so many new seedlings have been cultivated the past few years, almost every neighborhood has its own selection that are in good repute. The rot will probably affect all varieties under some circumstances, for thus far it is not proved to depend upon the kind planted.

Poultry may be kept from disturbing gardens by confining them until late in the day, and allowing them an hour or two before sundown to go at large. If well fed in the poultry yard, they will then be busy hunting for insects until night and not do much harm by scratching. Chickens in coops should be kept on clean ground, and not allowed to run in the morning until the grass is dry. Feed with cracked corn and milk curds. Set eggs, ff, m, for late chickens.

Provisions—Pork in barrels in the cellar, hams in the smoke-house, and other provisions, need looking after occasionally. See that the brine is of sufficient strength, and covers the meat in barrels—rusty pork is a poor article of diet Hams sowed in thin muslin bags, and whitewashed, will not be troubled by the fly. Keep them dry and cool. A good method to keep hams through the Summer, as we have proved, is to pack in barrels or bags with plenty of sweet cut hay around them.

Pumpkins should not be planted in the garden with squashes. Put them in with corn or potatoes, scattering them well over the field. In favorable seasons they will afford a good supply of very nutritious food for fattening stock in the Fall. Plant a patch of the cheese or other good variety for table use.

Root Crops deserve more attention than they are yet receiving in this country. Mangold Wurtzel and Sugar Beets, Carrots and Turnips are relished by stock when fed with hay, and promote their thrift by keeping up their appetite, as well as by the nutriment they contain. Sow carrots, parsneps and beets if not already done. Turnips do better in June. Try at least a small plot.

Sheep—Care for as directed last month. Cut off all tag-locks and trim the hoofs of any needing it. Castrate lambs when from two to three weeks old. Wash sheep, m, if the water be sufficiently warm, and shear, ll, or early in June. If sheep are kept principally for their wool, it is a good practice to mark the weight of each fleece plainly upon the ewe, and keep those yielding the most for breeders.

Sorghum—Plant, f, m, on ground prepared as for corn, and cultivate in the same manner. For soiling it may be sown broadcast, or better, thickly in drills. Last season's experience proved that in many localities in the middle States, it will be a paying crop at twenty five cents per gallon for the syrup.

Swine—Sows with their litters, need plenty of nourishing food. Allow none to run in the road. A hog pasture containing fresh water, should have a place on every farm.

Tobacco—Keep the young plants free from weeds, and transplant, m, l, to deeply tilled and heavily manured soil. Set the plants in rows three, to three and a half feet apart, and two and a half, to three feet distant in the row.

Tools, Machines, etc.—Examine mowers and reapers, horse pitch forks, horse hoes and other labor saving implements, particularly those that have been tested. Always buy, rather than borrow, if possible. See that every implement is kept in repair—harness well oiled, wagons, carts, etc., greased and otherwise ready for use. Have a tool house and work shop for storing and repairing farming apparatus.

Orchard and Nursery.

There is little danger that the market will be overstocked with good fruit by the present generation at least. There are thousands who have never yet tasted what the experienced would consider a first rate pear, peach, or grape. Even of the ordinary kinds there is very rarely an adequate supply to reduce the price to a point that would enable persons of moderate means to indulge freely. The success of pains-taking cultivators leaves no doubt as to the profitableness of fruit raising. But even though it is not made a leading branch of farm industry, there can be no good excuse for neglecting to stock the homestead with choice apples, pears, peaches, etc. *Take time* for it—it cannot be better bestowed than in providing these promotives of health; these luxuries that as much as any other feature make rural life desirable. It were much better that tree planting, except for evergreens, should have been completed last month, but make a trial of at least a few trees, now at the earliest moment, rather than not at all.

In the Nursery, the hurry of business is not yet over, much of the planting necessarily being delayed while taking up, packing, and sending away early orders. Many of the stocks, having been kept in the cellar, are still in good planting condition. Besides, this is the evergreen planting month, and so largely are these ornamental trees now grown to supply the constantly increasing demand, the nurserymen are still pressed with business. As soon as the planting and transplanting is over, grounds should be spaded, where it can not be plowed, and the plow or horse-hoe run through the nursery rows, adding manure where needed.

Apple trees suffer less than some other kinds from late transplanting. It were better to have finished with them in April, but by taking up, ff, with plenty of soil with the roots and resetting immediately, they will live.

Budded Trees—If not done last month, cut away the growth above the buds inserted last season, unless they have failed to take. Leave a few inches of the main stem above the cut, to which the new growth may be tied for support, ll. Remove all suckers.

Evergreens will be putting forth their new growth this month, and being in full vigor, are better able to bear transplanting than at any other season. Make a good selection of firs, spruces, pines, etc., for ornament and shelter, with arbor vitæ for screens, and transplant, m, l. Keep the roots as much as possible from exposure to sun and wind; they suffer more than deciduous trees, owing probably to the resinous quality of the sap which hardens easily, and stops the circulation. Choose a wet day, take up plenty of earth with them, and give sufficient room for the lateral roots in the new location.

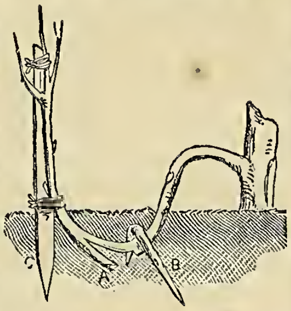
Grafting may still be done, ff, if the cions were previously cut, and are in good order; full directions were given last month. Rub off suckers, ll, so as to give the grafts all the sap.

Head back the leading shoots of pear and apple trees, especially those inclined to a strong, upright growth. Peach trees are improved by cutting back one-third of the last season's growth, not only upon the top, but among the outer branches. Dwarf pears are also greatly benefited by a free heading back. Cut near a bud upon the side where the leading shoot is desired, Open spaces can thus be filled with branches.

Hoe out nursery rows carefully, m, l. Much of the thrift of the trees depends upon keeping the surface light and porous.

Inarching, or grafting by approach, may be performed, m, l, on deciduous, and, ll, on evergreen trees. This is a ready method of constructing an ornamental gateway, bringing together, overhead, the branches of trees set for the purpose the previous year. Select limbs as near of a size as possible, of smooth growth; pare them alike, and bring them together so that the inner bark shall exactly meet on one, if not on both edges of the pared portions. Bind strips of bass matting or muslin, coated with grafting wax, firmly around them, and wind a string over the whole. If exposed to be swayed about by the wind, secure them to stakes, or the main branches of the tree. Leave the growth above the union until next season.

Insects require constant watchfulness. Catterpillar nests will soon show themselves if the eggs were not destroyed; brush them down at once, and crush them under foot. Wash the trunks of all trees covered with scale or moss with a mixture of 1lb whale-oil soap to 6 gallons of water, or common soap and water. Potash and water will answer the same purpose. Examine peach and apple trees for borers, if any saw-dust is found around the collar of the tree, probe the hole with a wire or slip of whale-bone, or if he cannot be reached in this way, follow the insect with a knife or gouge, and gently kill him.



Layer, ff, m, the shoots of quince trees and ornamental shrubs. This is also an easy way of obtaining an additional stock of grape vines for home use. Choose well-ripened wood of last year's growth, bend down and bury a portion, fastening it in its place with a forked stick, and support the part carried up from the ground with an upright stake. A cut is sometimes made partly through the layered portion to facilitate the growth of new roots. The soil should be made mellow for the new roots to strike in. The figure shows the whole process.

Mulching newly planted trees with straw or tan bark, is beneficial, particularly in dry weather. Spread it about half an inch thick over the surface as far as the roots extend.

Orchards should be cultivated, not to raise rye, oats, or corn, but to secure a more profitable crop, a full bearing of fruit. Spread a liberal coat of composted manure and plow it in, not deeply enough to disturb the roots near the surface, then harrow it occasionally through the season to keep down the weeds. Avoid wounding the trees with the plow—work about them with the hoe. Allow no suckers to grow about the body of the tree.

Peaches, apricots, and other stone fruits not transplanted last month, may still be set out, ff, with the precautions mentioned above, under apple trees.

Pears may also be removed, ff, if neglected until now. Form them to a compact head by cutting back a portion of last season's growth; this will also induce the tree to throw out fruit spurs. It is injurious to these or other trees to allow fruit to mature the first season after resetting; all the vigor is needed to recover from the effects of disturbing and wounding the roots, change of soil, etc.

Plow lightly and frequently between the nursery rows. Do not leave a furrow lying for a long time against the bottom of the trunks.

Plums—Set out, ff, if not already done. Cut out and burn all black knot excrescences. Dust the tree several times with air slaked lime, just as they are passing out of bloom, to drive away the curculio. It may be easily applied from a small bag of thin muslin tied to a pole, and shaken about among the limbs. This method has proved successful in some cases. Occasional showerings with solution of whale-oil soap are also recommended. Repeat the process twice a week until the plums are half grown. Let poultry have free access to the plum yard—they will turn the insects to profit.

Pruning—Except removing small branches with a knife, wait now until mid-summer. If any large branches must be removed, coat with wax, etc., as directed last month.

Seed Beds—Keep free from weeds, and shade evergreen and other tender sorts from the hot sun. The natural place for germination of tree seeds is under shelter, among the fallen leaves of the parent tree. Water occasionally during dry weather.

Stocks of apple, pear, cherry, etc., should all be out, if not done, set them ff.

Stools, that is, trees and shrubs kept to propagate from by layers, should now be spaded about, and the outer branches laid down, removing those which were layered last season, and are now rooted. With many shrubs this is the best method of increasing the stock. Quinces are now largely propagated in this manner. The upright growth should be frequently cut back to induce suckers.

Weeds—Treat them as intruders at all seasons.

Kitchen and Fruit Garden.

Want of time is the excuse usually made for neglect of this department. This would be valid if time could be more profitably spent, but an exact account of the produce of a well kept garden if devoted only to the cultivation of common vegetables, would prove it to be the best paying plot of the whole farm. Lying as it does usually near the house, it affords a convenient place to turn to account spare portions of time—the hour before breakfast, an occasional spell between showers on a changeable day when other labors are interrupted, etc., but its care should not be left for these alone. Its cultivation ought to be calculated for as much as hoeing corn, haying, or harvesting. A well kept garden upon a homestead, like a neat show case on a merchant's counter, is a sign of a good assortment in the general stock, and contains itself the most attractive articles. The light reflected from the vegetables and fruits of a thrifty well assorted garden, gives cheerfulness in the kitchen, and satisfaction around the family board—*that* is an item worth reckoning.

Gardeners in this latitude have generally, without doubt, improved the early opening of Spring, and beds are completed, and much of the seed sown according to suggestions of last month. Many things written then apply equally now, where the plants are not already growing.

In arranging the plan, it is economical to lay out the grounds so that two or three successive crops can be taken from the same plot, as; turnips to follow early peas, the potatoes first dug to be succeeded by late cabbages; radishes and lettuce to be scattered among hills of melons and other vines, etc.

Asparagus now rapidly sending up its succulent shoots, should be kept cut to prolong the yield. Cut carefully so as not to injure the shoots coming up.

Beans—Plant pole and bush varieties, m, l, cover lightly with the eyes set downward. We prefer a trellis of wires or cords extending along stakes, to poles. Where poles are used, set them before planting.

Beets—Sow, ff, m, in drills half an inch deep, eighteen inches apart. For Winter use sow, ll. Give them room to extend downward into rich, mellow soil.

Blackberries—If not transplanted last month, set them, ff, m. Stake up old canes or train them as described last month. Seeds of the blackberry should be sown, ff—last month was still better. Put them in mellow soil in drills eighteen inches apart, covering with half an inch of finely pulverized earth. Soaking the seed for a few hours before planting will facilitate vegetation. Keep the young plants free from weeds. They will be ready for transplanting next Spring, and for fruiting the succeeding year.

Borecole and Broccoli—Sow, ff, m, in rich soil and cover very lightly. Water if dry. Transplant from the hot-bed, f.

Cabbage and Cauliflower—Sow, f, m, for late use in rich mellow ground. Plant out, ff, m, from hot-beds and cold frames if any remain. Scatter soot or dry ashes and lime over the seed rows to protect plants from the garden flea. Keep former plantings well hoed, and examine frequently for the cut worm.

Carrots and Parsneps will go down deeply if encouraged to do so by well trenched ground properly enriched. Sow, ff, if not already in as directed last month.

Capsicums (Peppers)—Plant out from hot-bed, f, m. Set them in rows two feet apart, eighteen inches distant in the row.

Celery—Sow, ff, m, for late use. Set early plants, m, l, in trenches a foot to eighteen inches deep; water and shade them until fairly started. June will be early enough to transplant the main crop.

Cold Frames—Remove any remaining plants to open grounds, ff, m, and store the frames for another year.

Corn—Plant small plots of sweet varieties, f, m, l, at intervals of a week or ten days, to ripen in succession.

Cucumbers—Transplant those started in hot-beds as directed last month, f, m. Plant seeds, ff, m, for Summer use and l, for later crop and pickling. Place over the young plants light frames covered with millinet, to protect from insects; or if these are not used, visit early in the morning, and destroy them with the thumb and finger Sprinkling the plants with water saturated with hen droppings, assists in keeping off insects, and in hastening the growth. Put in abundance of seed at intervals, to feed the insects that escape. They can be thinned out when danger is past.

Currants—Finish planting, ff. Remove all dead and decaying branches. Wash water and house slops thrown around the bushes will benefit them, and remove a nuisance too often seen near the back door.

Egg Plants—Set out from the hot-bed as soon as the weather is warm and settled, usually about m. They will not bear cold.

Fruit Trees—Train wall and espaliers to proper form, cutting back as needed. Rub off shoots appearing out of place.

Grapes—Secure them to stakes, trellises, or arbors. Lead wire is excellent for this purpose; it yields easily so that the vine is not cut, and may be readily twisted in fastening. Vines may still be set, ff.

Herbs—Set any remaining roots, ff.

Hoe frequently about early vegetables to destroy weeds and keep the surface porous. Young plants just pushing through the surface are often injured by a hard crust;

formed during drouth, break it up carefully, not injuring the tender shoots.

Hot-Beds—Complete transplanting from them, f, m, and put away sashes and frames for use another season.

Insects—Guard against them by dusting with soot, snuff, pepper, etc., and hasten the growth of vegetables out of their reach by sprinkling with liquid manure; the odor of this will repel some kinds.

Kohl Rabi—Sow, ff, m, and treat the same as cabbage, setting the plants closer, say in rows two feet apart, and one foot distant in the row.

Lettuce—Sow, ff, and every two weeks for a succession. Thin cabbage varieties to nine inches apart, to allow plenty of room to form good heads. The plants removed will supply the table. Transplant from hot-bed, ff.

Manures in liquid form are convenient of application to vegetables, and aid in rapid growth. See page 139.

Melons—Plant, m, l, protecting and cultivating as directed for cucumbers. See article on page 149.

Mushroom Beds for Summer use may be made, f, m.

Nasturtiums—Sow, ff, m, for flowers and for pickles.

Okra—Sow. ff. Plant out former sowings, m.

Onions may still be sown, ff, for late use. The pamphlet on onion culture published at this office, gives complete directions by practical men. Set top and potato onions, ff, if not put in last month.

Peas—Sow, f, m, l, for a succession. See article on page 117, April No. Bush early sorts, m, l.

Potatoes—Plant, ff, if not completed.

Radishes—Sow, f, m, l, at intervals of a few days. Scatter the seed between rows of beets, and around hills of vines, to save space.

Raspberries—Tie up canes to stakes or low trellises, ff. Cut back long straggling shoots. Keep the ground well enriched by forking in well decomposed manure.

Rhubarb—Set roots or sow seed, ff, if not supplied. Hoe out all grass and weeds, and keep the surface loose. Manure heavily around them.

Sage, Savory, etc.—Sow, ff, m. Transplant last year's sowing.

Salsafy—Sow, ff, m, on soil deeply worked, the same as for carrots.

Seeds—Try new varieties before purchasing largely. Set out all remaining roots or plants intended to furnish a supply for next year.

Squashes—Plant, f, m. See directions last month. Protect from insects with frames covered with millinet; other preventives are of doubtful utility; this is certain.

Strawberries—New beds may be made, ff, m. Water in dry weather. Keep free from weeds. Mulch with tan bark or cut straw before blossoming, to keep the fruit from the dirt.

Tomatoes—Transplant from hot-bed, ff, m, and sow seed at same time for late use. Fruit may be secured a week or fortnight earlier by care in transplanting so that the growth is not checked. Set the vines four feet apart each way, if to be trained on horizontal frames—if upright supports are used (see page 148) three feet is sufficient.

Transplanting—This may be done so as to be scarcely felt by the plant. A moist cloudy day is the best time, but if it be dry, first thoroughly wet the earth around the plant, so that it will adhere to the roots. Dig a large hole, and fill it with water; introduce the roots, and sprinkle in earth as the water soaks away. *Put on the top half an inch of dry earth;* this will prevent a hard crust baking on the top, and attract the moisture from below, which keeps the plant from wilting, and it will not be necessary to shade it even, though with tender plants this precaution is useful. If it be necessary to water after transplanting, never apply it directly upon the surface; dig a hole by the side of the plant, and pour in the water—a crusted surface will certainly retard growth, and prevent dews from being absorbed.

Turnips—Hoe, weed and thin those sown previously. Sow for Summer use, f, m. Next month, or the following will be early enough for the Winter stock.

Weeds need no cultivation. To secure a good crop of them, neglect to hoe the paths, and between the rows—they require nothing but to be let alone, when they will soon take full possession.

Winter Cherry (Physalis)—Plant out, f, m, the same as tomatoes, setting them nearer together, say two to two and a half feet distant. Seed may still be sown, ff, m.

Flower Garden and Lawn.

—A busy season is May in the flower garden. Laborers are at work spading and trenching the ground, working in a coating of manure at the same time; others are laying out the beds, and preparing them for planting, some of the female portion of the household follow with seeds, pot plants and bedding flowers, leaving behind them a smooth, even surface, already sprinkled over with blooms of verbenas, petunias, dicentra, carnations, and other plants from the house, with a fine show of hyacinths, narcissus, tulips, and crown imperials. Such a show of bloom, added to the green foliage of the lilies, pæonies, and other herbaceous perennials, with the flowering shrubs, renders the garden "a thing of beauty," even as soon as made up in the Spring.

If new grounds are to be laid out and arranged, no time should be lost. One of the first things after deciding upon the boundaries, is to fix upon and lay off the avenues and walks. Having established a firm foundation, using stones or laying tiles beneath them, to carry off the water as fast as it falls, cover with coarse, clean gravel, a little rounded up in the center. Next arrange the flower beds, grass plots, shrubbery, and trees. For instructions regarding these see pages 146 and 147 of the present month. It is hardly to be supposed that everything will be made complete in a single season.

Annuals—Sow, ff, m, as noticed in the calendar of last month. It is essential that a good variety of fine blooming annuals should now be put in to keep up a show of flowers late in the season, after most of the perennials have cast their blossoms. Those sown in the houses to forward their growth, may now be transplanted to the open ground.

Bedding Plants—Set out a bed or mass of verbenas, another of petunias, with a patch of daisies here, and geraniums or other good bedding plants, somewhere else. The dicentra, lavatera, and salvia are also good bedding plants. This is far better than to mix them up promiscuously. Such beds, of fanciful shape, have a fine effect when scattered over the lawn.

Biennials and perennials should be arranged ff, as they are already beginning to grow. Do not transplant them too often. We have frequently seen pæonies, hollyhocks, lilies, campanulas, etc., kept in a weak state by transplanting nearly every Spring. Where it is needful to increase the stock, remove a portion from one side, and leave the remainder undisturbed.

Borders and Lawn Beds—After planting, rake off, and leave in a smooth, neat condition, with no foot prints upon them. Use a fine toothed iron or steel rake occasionally, after planting, to prevent the earth from crusting.

Box and Grass Edging—Trim or pare the grass borders with a spade, or still better, an edging knife. Set out new borders both of box and turf, trimming the box only to remove the rusty portions, and to keep of even growth.

Bulbs—The earliest blooming are already fading, but there should still be a fine show of crown imperials, tulips, and a few hyacinths. Keep well supported. and stretch a muslin awning over the choicest, to lengthen the period of bloom, removing it at night and during cloudy weather. Set Autumn blooming varieties, ff.

Carnations, Pinks, Picotees, Pansies, Daisies, etc.—Plant out from pits and green-houses, f, m Keep the flower stalks of those in bloom, securely tied to neat painted stakes. Separate layers, and divide roots to increase the stock.

Cypress Vine, Morning Glory and other annual Climbers—Sow, ff, m, and train upon strings around a central pole as shown on page 339, Vol. 17. Unsightly buildings, rough fences, etc., can be almost hidden beneath a mass of bloom, when covered with these climbers. Screens or lattice work may also have these vines running over them.. Cypress vine seeds vegetate much more freely when soaked in tepid water for 12 hours before sowing.

Dahlias, Gladioluses and Tuberoses—Unless already exposed to the sun, put in boxes of earth, ff, and place in a warm, sheltered situation. There is nothing gained by setting out early; m, is about the best season, when the ground is warm and dry.

Dicentra Spectabilis—By all means add this to the flower border, if not already there. Plant and treat as the pœony, which it somewhat resembles in habit of growth. They are easily propagated by dividing the roots.

Drain, ff, any wet portions as directed last month.

Evergreens—This month is the best in the year for transplanting evergreens. They may be set at any time during the month, and even into June, but we prefer planting from the first to the 10th of May, just after the trees have begun to grow. In transplanting, keep the roots from the sun. Hollies, rhododendrons, and other broad leaved evergreens do better when removed with a ball of earth attached. To keep evergreens in a compact shrubby form, cut off the leaders and some of the side branches. If desired for stately trees, do not injure the leaders. Set hedges and screens of Norway Spruce, arbor vitæ, hemlock, etc.

Frames and Pits—These may be emptied of their Winter plants, ff, m. Set them in borders and flower beds, and store away the sashes and shutters for another year.

Flowering Shrubs—Plant, ff, any not already set out. Some of the early blooming are already in bloom, or have even cast their flowers Plant freely about the lawn, where they have a fine effect. They are also quite appropriate along the borders of the flower garden. See page 146.

Gravel Walks—As soon as the litter and rubbish of the lawn and flower beds are cleared away, attend to the gravel in the walks, spreading out that which was raked in heaps last Fall, and adding new where necessary. Rake off smoothly, and roll with the garden roller.

Hedges—Set out deciduous, ff, and evergreen, f, m. Trim moderately those heretofore neglected.

Hoes will need to be brought into requisition by the middle of the month. Keep the weeds down at the start, and the work will be much easier, besides giving the flowers all the benefit of the manure at the roots and the sun at the surface.

Honeysuckles, Wistarias, Ivy, Bignonias, Clematis and other perennial climbers—Set, ff, if neglected until now. Arrange on trellises or lattice work. Old wood may be layered for an increase of stock. Sow seeds, ff, m.

Hot-Beds—Transplant, ff, m, anything remaining in them, use the manure for enriching the borders, and store away the frame and sashes for another season.

Labels, Stakes and Dahlia Poles should all be in readiness for use when needed. Mark the seeds when sown, by putting in small painted sticks with the names written upon them. It is annoying to have a new plant come up and find you have no means of ascertaining what it is. It is a good plan to make a record and plan of each day's sowing, putting down the kinds of seeds and roots planted, with their exact positions.

Lawn—This has doubtless already been raked over, grass seed sown on any bare spots, and a dressing of bone dust, plaster or fine compost given it, so that a fine, lively green covering gives promise of a compact and firm turf. It will need mowing, m, l, and should be cut very evenly. See page 136 upon making a "Grass Plot."

Mulching—A coating of saw-dust, spent tan, old leaves, muck, or stable litter spread around newly planted trees, will keep the ground moist in time of drouth, and often save the life of an evergreen, that would otherwise die. If unsightly, cover the mulch slightly with earth.

Pruning—Although we oppose cutting off large branches at this season, yet the pruning *knife* may be used where necessary, mainly to cut back last year's growth, so as to form a more compact or bushy head. Young gardeners prune too much. Shrubbery needs to be kept pretty dense to look well. Deciduous trees do not want straight branchless trunks six to eight feet high with long straggling limbs above. Evergreens should branch *quite down to the ground.* Their outer extremeties may be cut back slightly, to make a dense shrub-like growth.

Roses may still be set, ff. Those wintered in the houses or in pits, may be put out, f, m. It is better to turn them out of the pots and set in the borders. Plant freely of this queen of flowers, especially those sorts which bloom several times during the season. Layer old wood, m, l. Tie up pillar and climbing varieties, pruning if needful. If slugs (green worms) appear upon the leaves, ll, sprinkle freely with dry wood ashes, or lime, while the dew is on, or still better, syringe with a strong solution of whale oil soap—say one lb. of sap to six gallons water. A few applications of either of the above will exterminate the present insects, but the bushes must be watched.

Shade trees may also be planted, ff, although rather late for deciduous kinds in this latitude. More care is necessary now than earlier in the season.

Water those plants recently set out, should the weather prove dry.

Weeds should not be allowed to get a start in these grounds. They do much more damage now, if allowed to grow, than later in the season.

Green and Hot-Houses.

Fire heat is now only required among the tropical plants, and occasionally in the other houses during cool or wet weather to dispel damps and keep the atmosphere at as even a temperature as possible. By the middle of the month, most of the plants will have been taken to the open air, and the comparatively empty houses will need little care. The ventilators may be thrown open, and only closed in unpropitious weather. Previous to removing, much pains should be taken to harden the plants by giving abundance of air and gradually reducing the temperature. It is not advisable to be in haste to empty the houses before the weather is settled warm. Frosts frequently occur early in May, and the tender plants from a warm climate (heated houses) are easily chilled, if not actually frozen. In carrying out, take the more hardy first, such as roses, camellias, chrysanthemums, verbenas, etc., leaving the more tender sorts until the middle of the month Some of the plants will do better when turned out of the pots and planted in the border, while many of those which continue from year to year, without renewing do better, kept in pots. Set them in a place sheltered from high winds. Some florists prefer placing the pots in the border, setting them in the ground up to their rims. In all cases where kept in pots, they will require more water, and should be cut back with a bold hand.

Azaleas—Water and syringe freely now that they are growing rapidly. Cut back straggling branches to form a compact head.

Bedding Plants—Large numbers of these are now wanted to grace the flower borders and lawn beds. Plant freely in masses, which produce the finest effect.

Cactuses may be readily increased by cuttings put in, ff, m. Examine for and destroy insects.

Camellias—These have completed their bloom and should now be in a fine growing state. Keep them in a thrifty condition, so that good sized healthy flower buds may be formed later in the season. Give them an airy situation, partially shielded from the sun, syringe often to keep down insects.

Cinerarias are still in bloom in many houses. Keep in a warm situation, watering freely.

Cuttings of both woody and succulent plants from well ripened or firm growth, may now be freely made, and struck in prepared soil, under glasses.

Fuchsias—Plant out in borders, m, or shift those intended to bloom in pots. Water freely. Increase the stock by putting in a good supply of cuttings.

Grapes require care according to the degree of forcing they have received. Some vines may now show good sized berries or nearly ripe fruit, and require little water, especially among the bunches. Others are later and need frequent syringings and pinching back. A portion may need thinning with scissors. The borders should be uncovered, manured and forked over.

Inarching may be performed on woody plants that do not root readily by cuttings, such as oranges, lemons, etc., as described under orchard and nursery.

Insects—Allow no stronghold to become colonized at this season. It will be more difficult to dislodge them afterwards. Water and tobacco fumes will usually do the business. Read the illustrated articles upon the "Insect World," and see if some aids may not be introduced to keep the injurious aphides and other insects in check.

Japan Lilies—Plant out, ff, m, and tie up flower stalks of those in bloom. Increase the stock by separating and potting the scales. Plant seeds for new varieties. See illustrated article on page 148.

Layer, ff, woody and herbaceous plants for increase.

Oranges, lemons, oleanders and myrtles—Carry to open ground and water frequently. Plant seeds for a stock.

Pelargoniums—A good stock of these should now be ready for bedding out. More cuttings may still be put in for Winter blooming plants.

Roses may all be removed to the open grounds, f, m. Increase the stock by cuttings, ff.

Water freely, both before and after removing plants from the houses. Evening is the best time to apply it.

Apiary in May.

BY M. QUINBY.

Whenever the weather is wet or cold for a few days, all light colonies will need especial care to prevent starving. When the Spring has been favorable, one stock in 500 on an average, will throw off a swarm during the blossoming of the apple orchards. A larger number will swarm about the time these flowers are gone. But swarming is not general until clover blossoms. In most places, between apple and clover blossoms, there is a scarcity of honey; the bees of very good stocks, at this time having nothing to do, will cluster outside, if the weather is warm; indicating that the hive is crowded, and that a swarm may be expected almost immediately. In a few days, honey will be more abundant; these bees leave to collect it, and the hive presents a deserted appearance, leading to the supposition that a swarm has actually left. These appearances at this season, are not to be depended upon. An examination will generally decide, and save much anxiety. A hive that swarms, changes its queen; the old one does not leave until preparation is made for a successor. Every interested bee keeper will acquaint himself with the appearance of the queen cells; and the swarming season is the best time. Such as have the movable comb hive, have only to blow some smoke among the bees, or sprinkle them with sugar water, to keep them quiet, and open the frames, when every cell may be seen. The box hive must be inverted, and the bees may be kept quiet and driven away from the ends of the combs by smoke. The queen-cells—generally situated on the edges of the combs—from 3 to 20 in number—are about half an inch in diameter and three eighths deep when they receive the royal egg. As the open end is downward, the interior with its contents, if any, is readily seen, when the hive is inverted. When the egg is hatched, the cell, unlike those for other bees, is not full length, but additions are made to accommodate the growing wants of the royal larva, and sealed up when about an inch long. At this period, if the weather is fine, the old queen leaves with the first swarm. By watching the progress of these cells every few days, the issue of the first swarm may be predicted with considerable certainty. If honey is scarce, they will pass this period a little; if very abundant, they will issue a little in advance. If it is suspected that a hive has swarmed, and a thorough examination can discover none of these cells occupied, it is evidence that no swarm has left....When it is more of an object to increase stocks, than to obtain surplus honey, second, and even third swarms in this month may be hived separately. Unless the season is a poor one, they will be likely to obtain stores for Winter. Do not neglect a swarm long, after it has clustered—in this situation, arrangements for a departure are sometimes made somewhat expeditiously. Have the hive to receive the swarm, clean, and not too smooth inside. It is important that the whole swarm —except the few flying—enter the hive. Stirring gently will hurry them on, or, if obstinate, sprinkle with water. Carry to the stand immediately, raise the front half an inch, and protect from the sun.

Notwithstanding all the proof offered by Mr. Doddridge to the contrary, with the additional testimony of the editor, (See Agriculturist for July, 1859.) I will repeat that I consider "no noise is necessary to make them cluster." I have the proof of over 30 years' practice without music, and have superintended the management of more swarms, probably, than most apiarians. Yet I never found the person, whether an advocate for the tin-pan or not, that could count a less per cent in swarms lost than myself. Bees sometimes act very singularly without any music. As not over three or four swarms in a thousand, will leave for the woods without clustering, it is not strange that many persons think *they have compelled* them to do just what they would instinctively have done without interference. When they leave after clustering, it may be attributed usually to bad management, such as allowing them to hang too long when they settle, not getting all the swarm in the hive, raising the bottom of the hive too high, leaving them standing exposed to the hot sun, strong smell of new paint, etc., etc....When the combs of the old stocks are well covered with bees, raise the hive a little in front. Continue to watch the weak colonies for worms, and when the bees increase so as to make examination difficult, split some elders, scrape out the pith, cut some notches cross-wise, and lay them flat side down under the hive. Take them out once a week and destroy the cocoons.

"Shall I buy 'American Guano'?"

[Chapter V, of "Scientific and Practical Talks on Manures," was prepared for this number, but owing to the special interest now manifested in regard to "American Guano," we have deemed it worth while to leave our regular article over to another month, and let the following take its place.]

During the past few months, this question has been addressed to us by subscribers, personally and by letter, a great number of times. In fact we expect that every few minutes during the day, some one will knock at our door, and almost invariably ask on entering . "What do you think of this American guano?" We therefore offer a general reply here. But first let us correct a false impression that we have any "preconceived prejudice" against the article. On the contrary, we would gladly commend it in the highest terms, could we do so consistently with our own views. We dislike as much as any one, the monopoly of Peruvian guano, and would be right glad if American farmers could dispense with its use altogether. We could heartily wish that all that is claimed for the "American guano" might prove to be below its real merits. It would be a national blessing, of more value than all the gold of California. Several enterprising men have devoted their time and money to its introduction, and, so far as we know, they have done this in the belief that they are doing the country, as well themselves, good service, in hunting up and bringing these fertilizers here.

But, as we have said to some of them personally, we think they are guided by an incorrect theory in regard to the wants of our soils and crops; and our present opinion is, that, after a year or two, these purely phosphatic guanos will have had their day, and cease to be in demand by farmers, at least where they have been tried. That some portions of the material brought from the Pacific Islands may prove moderately useful, is probable, for we have seen specimens which contained sufficient ammonia and other organic constituents to warrant the belief that they would be beneficial to crops. And this will, in part, account for the fact that some persons have been pleased with their first trial of American guano. We have examined a dozen different specimens of the material, in its unground, unmixed state, and found them of various composition, running all the way from a nearly pure phosphate, up to one containing a valuable admixture of organic matter including a considerable percentage of ammonia. Now any person chancing to obtain a sample of the last named quality would doubtless see sufficiently good results to lead him to try it further, and to commend it to others. We have seen certificates from such persons. But how many are there in the country who have reaped no benefit? We have heard of many such, yet no one is interested in collecting and setting forth the cases of failure, and farmers, as a class, seldom write out their experiences, unless it is drawn from them, and so we seldom get the dark side.*

We have hesitated to discourage the introduction of the American guano, because we have hoped, that in the progress of the enterprise, there would be found deposits containing *organic* material enough to verify at least a portion of the expectations indulged on the part of the importers, and the public. This may yet turn out to be the case, and we advise those enlisted in the enterprise to turn their attention specifically to the discovery and introduction of organic deposits; for we are firm in the conviction that the purely mineral or phosphatic guanos, such as are now mainly brought here, will not prove profitable or satisfactory. We are aware that the sellers take a different view, and have on their side many scientific men; but we are quite willing to put our opinions on record to be tested by time and experience. In the meanwhile, we must caution not only farmers but the importers themselves, not to invest too largely in a material which is at best of doubtful utility. In our last article on manures (No. 4) we stated, perhaps fully enough, our reasons for calling in question the supposed value of mineral manures generally, including the phosphates.

But whatever may be the character of some of the American guanos already introduced, or of those yet to be found and brought here, we will now only consider the general character of those offered, remarking that the chief excellence claimed for them by those interested, is that they abound in phosphates. We have been furnished with the following recent analyses of several cargoes, and the remarks thereon by Prof. S. W. Johnson, who conducted the experiments.

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* An illustration may be given of the fact referred to above. A few years since, one of the special pleaders for super-phosphate visited a New-England town, and lectured so strongly in favor of the use of this material, that the cultivators at once made up orders for some 80 tuns, at a cost to them of nearly $4,000. It proved a failure, and we believe not a pound of it has since been sold there. But the buyers quietly pocketed the loss, acknowledged themselves sold, and discarded all scientific teachings in regard to agriculture. But no one of them ever took the trouble to collect and publish the facts. On the other hand, in another town, one man obtained, or thought he obtained, good results, (perhaps he had an extra good sample,) and on application he gave his certificate in its favor. That certificate, and a few others of similar character, were published all over the land by interested parties, and very many persons bought super-phosphate on the strength of them. We only mention this as an illustration of how one-sided statements may sometimes go forth, and further to invite those who try any new fertilizers to report their *failures* in all cases. Let us have both sides.

YALE ANALYTICAL LABORATORY,
NEW-HAVEN, Conn., March 16, 1860.

JOHN B. SARDY, Esq —*Dear Sir:* This may certify that I have inspected the discharged guano cargoes of the ships Gosport, Rambler, and Polynesia, late from Jarvis Island, have had average samples taken in my presence, and have submitted the same to chemical analyses, with the following results. The table also includes analyses of a sample of the Victory's cargo, Jarvis Island, and of a specimen from Baker's Island.

Ships..........	Moisture..........	Organic matter and combined water....	Lime..........	Phosphoric Acid....	Sulphuric acid (once estimated)........	Undetermined matter & loss..........	Bone Phosphate of Lime equivalent—average, per cent....
Gosport..	9.33	13.37	33.88	21.81	20.33	1.28	47.47
do.	9.24	13 22	33.59	22.01	20.33	1.61	
Rambler	13.22	8.39	34.17	19.10	25.07	.05	41.47
do.	12.69	8.97	33.68	19.18	25.07	.41	
Victory	7 08	7.75	36.31	25.67	21.75	1.54	55.01
do.	8.85	6.65	36.33	25.12	21.75	1.60	
Polynesia	12 00	7.70	34 83	26.47	15.85	3.15	59.17
do.	12.41	7.34	34.67	28.15	15.85	1.58	
Baker's Island	3.57	8 25	41 54	39.24	2.16	5.24	83.93
do. do .	3 58	9.02	41.09	38.24	2.16	5.91	

These cargoes together show an average of Phosphoric Acid equal to 50 per cent of Bone Phosphate of Lime, which is sufficient to constitute a valuable fertilizer, especially since the material is, on the one hand, very finely divided, and on the other, contains considerable organic matter, and Sulphate of Lime, which, being themselves easily decomposable or soluble, must leave the Phosphate of Lime exposing a great surface to the solvent action of the soil water. Simple calculation shows also that in the Jarvis Island Guano, by far the largest share of the Phosphoric Acid exists in the form of what is commonly called *neutral Phosphate of Lime*, which is characterized by a much greater solubility than is possessed by the Bone Phosphate. For these reasons this guano must manifest greater activity than other guanos which are more compact, and consist mainly of Bone Phosphate of Lime....

SAM'L W. JOHNSON, Prof. of Analytical
and Agricultural Chemistry, Yale College.

Probably Prof. Johnson designed the above simply as a professional private business letter; he should have stated the results differently, if for the general reader. The second column, "Organic matter and combined water," gives no valuable information. We are left in entire doubt as to *how much* of it is "combined water," and *how much* is "organic matter." So also, we have no indication whether the organic matter is simply useless or nearly useless carbonaceous material, or whether it contains an appreciable amount of useful nitrogenous compounds.

We have confidence in Prof. Johnson's skill and integrity as an analytical chemist, but we must differ with him in regard to the value he attaches to these guanos, and to phosphoric acid generally. He estimates *soluble* phosphoric acid as worth 12½ cents per lb., and the *insoluble*, at 4½ cents per lb Upon this basis the "Sombrero guano" imported into southeastern Connecticut quite largely, was estimated to be worth over $30 per tun. Many of the farmers who bought it upon this estimate, and have tried it, would not now buy it at any price.

Prof. Johnson, very guardedly says above: "*Simple calculation shows, etc.*" But we think these calculated values of phosphoric acid are not to be depended upon in estimating its real value as a fertilizer. If the phosphoric acid in Peruvian guano really constitutes the *estimated* part of the value of that material, then we admit the calculated value of phosphoric acid in other fertilizers; but *we* attribute the beneficial effects of Peruvian guano, bones, etc., mainly to the organic matters, and especially to the ammonia they contain.

The above analyses show the elements of a notable amount of sulphate of lime (plaster of Paris) in the first four specimens. This is highly valuable upon some soils and crops, while on others it is nearly or quite useless. We have seen surprising results from the use of only 200 lbs. of plaster to the acre And here is another mode of accounting for the occasional good results obtained last season from the American guano. The use of 300 to 600 lbs. of this to the acre, would furnish plaster enough to alone give good results in some cases. But farmers can not afford to buy plaster in the form of American guano at $30 to $40 per tun, when the simple unmixed plaster is abundant at $6 to $10 per tun.

To sum up: the American guano is recomended and sold mainly as a fertilizer abounding in phosphoric acid, and this in our opinion is of only moderate value at best*—not enough so, to at all warrant its importation from the Pacific Ocean. Good results have sometimes been obtained by the use of the American Guano, especially where it has chanced to contain abundant organic matter, and also where it has been used freely enough to supply plaster to the soil. But the results have not been uniformly good by any means, and the present importations do not contain organic matter enough to be taken largely into account in estimating their value. Therefore, basing our opinions in part upon the considerations stated above, and in part upon the reports of the results of its use thus far, we are reluctantly forced to answer those asking our opinion, that we can not advise farmers to purchase the American guano in quantity, until something is offered of different general character and composition from that now sold. Limited quantities of it may be tried by the side of other fertilizers.

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* There is one view of the value of soluble phosphoric acid which we have not seen stated, viz: that like other acids it may act as an absorber or retainer of ammonia, and so far it may be valuable to soils; and this may account for the good results obtained from the use of the soluble phosphates. But in any form in which phosphoric acid is accessible, it costs vastly more than sulphuric acid which is a notable "fixer" or retainer of ammonia.

"What Manures Shall I Buy?"

"If you do not advise to use the manufactured super-phosphates, or the manipulated guanos, or the Sombrero, in short, any of these mineral fertilizers, pray tell us what manure we shall buy?"

Perhaps you need not buy any. If on the better class of prairie, or on other lands where there is plenty of vegetable mold upon the surface, then a good plow and a good harrow, to break up and pulverize the surface well, so that the air may have free access to decompose the organic matter, may be the best "manuring" you can give this year. An application of alkali, in the form of ashes or lime, mingled with the soil, is frequently good to remove sourness, and hasten the decomposition of the organic materials, and prepare them to feed the plants. Alkalies are good on all cold, wet, or sour lands, wherever located.

On the poorer lands, especially in the older sections of the country, get the best *organic* manures that are accessible. Good stable manure is always the best, and usually the cheapest, where it is to be had. Next to this we esteem finely ground *unburned* bones—not so much for the phosphoric acid they contain, as for their organic matter. We have this Spring bought of Messrs. A. Lister & Co., of Tarrytown, N. Y., 1½ tuns of dry bone saw-dust, for 1½ acres of ground which we wish to cultivate very highly. (We mention this to show that we 'practice what we preach.')

Next to unburned bones we esteem pure Peruvian guano, the kind that costs $60 per tun—not the "manipulated," nor the "No. 2," which is sold at a less price, after going through some process of reduction. This, sown in the drill at the rate of 100 to 500 lbs. per acre, and well harrowed into the surface, or scattered as a top-dressing, is usually a paying application. The amount per acre depends upon the poorness of the soil. For high culture, as in gardens, 600 lbs. or more per acre will not be amiss.

Next to Peruvian guano, try—well, we hardly know what to recommend, for there is little else in market always worth buying at the price asked, and the transportation. There are several varieties of animal compounds, made in limited quantities, which are sometimes cheap at the prices asked for them, and sometimes not. We hardly dare recommend them for general use. Among them are: the blood and wool manure, when purely blood and wool, and not mixed up with sand; the poudrettes, when not too liberally compounded with muck, and when the excrements, from which they are made, have not been taken from cess-pools where a constant flow of water has washed out the most valuable portions. A fuller description of the fertilizers above alluded to, and others, will be given in the regular chapters upon manure.

Letter from Timothy Bunker, Esq.

JAKE FRINK SOLD.

MR. EDITOR: The Spring work came on so sudden, that I did'nt get time to say any thing about Hookertown folks, last month, and now I would'nt say a word, if it were not for fear that other folks would get taken in just as bad as neighbor Frink. You needn't think that Jake's body has been put up at auction; but, what is about as bad, his wits have been in the market, and gone to the highest bidder. Now, you see, we have got our full share of poor land up here in Connecticut, and of all the land in these parts, Jake Frink's is about the poorest. He has a lot of twenty acres, lying up towards the Whiteoaks, a poor worn out sheep pasture, not worth to exceed five dollars an acre. He bought it a dozen years ago, and gave a hundred dollars for the lot, and it has not improved any under his cultivation. All he has ever done for it, has been to plow up occasionally a patch of it for buckwheat, or for rye. The rest of the time it has been pastured with sheep. It is a light, sandy loam, bearing a plenty of five fingers, and mullen, and a little red top, with other wild grasses. Jake was upon this piece of land last Summer, plowing for buckwheat, when a fellow came along in a fine carriage, with a span, and inquired for Mr. Frink—Jacob Frink, Esq, he called him. As Jake tells the story, he was considerably elevated, to hear a well dressed city gentleman calling him "Esq."

"So I holler'd whoa to old Buck and Bright, and axed him what his name might be, and where he was from. And he said:"

"I'm Mr. Smith, the senior partner in the firm of Smith, Stubbs, Darby & Co., of Philadelphia, proprietors of the patent for the improved, imperial, nitrogenized Tafeu."

"Wall now, I'm Jake Frink, and nothing else, and don't know enny thing but English, and not much of that. I don't know what Tafeu is, never heard of it."

"Just so, Esq. Frink, I should think from the looks of this field, that you were a stranger to the most remarkable manure ever invented for the improvement of the soil."

"Oh! it's a manure, is it!"

"Yes, sir-ee, a wonderful fertilizer, that will grow forty bushels of wheat to the acre, one hundred of corn, and from three to four hundred of potatoes. It is great on grass, bringing up such poor sandy land as this to a production of four tuns of hay to the acre. It has the happiest influence upon fruit trees, making the wood grow rapidly, and adding four-fold to the fruit. By the use of this Tafeu, the produce of a farm may be doubled the first year, and quadrupled the second. Every man who purchases the article is sure to get rich."

"You're jest the man I've been wanting to see this many a year. You see I've been farming on't, this well nigh thirty year, and I han't got all my land paid for yit. I am all the time cramp'd to git along, and if you've got a resate for making folks rich, ye see I shall go in."

"But I have not got the Tafeu along with me, to sell this morning, I am securing agents to dispose of it. I sell rights to towns, and to counties, and the man who gets the right to sell the article, makes his fortune, the first season, while the man who buys will have to wait a little. For instance, if Esq. Frink, buys the right for Hookertown, and sells a thousand tuns he makes five thousand dollars, for we allow our agents five dollars a tun on the sales. You have in town at least two hundred farmers, and they will want on a safe calculation five tuns of Tafeu, each."

"Yes we've got more'n four hundred farmers in town, and I'm the chap that can sell the stuff tu 'em, if there is any vartu in talk."

"You see," continued the fluent Mr. Smith, "I sold the right to Col. Babcock, of Spruce Hill, last year, and he told me he made over ten thousand dollars, and there are hundreds more I could mention in other States, that have made handsome fortunes out of our fertilizer, the first season."

"And how much are you going to ax for the right to sell in Hookertown?"

"Well we generally sell county rights, for fifty dollars, and town rights for about ten, a little more or less according to size. But seeing it is you, Esq. Frink, we will let you have the Hookertown right for nine dollars."

Jake Frink is not a monied man, but he happened to have just that amount in bills in his wallet, and he handed it over to the oily tongued Mr. Smith, who delivered him his right to sell Tafeu in Hookertown, duly signed and dated. He told Jake as he drove off, that a cargo would be in from Philadelphia, and delivered at the landing next Saturday.

Saturday came, and Jake went down with his old bob tailed mare, bright and early, expecting to see a schooner discharging Tafeu. But he found nothing but a coal vessel at the dock, and the captain had never heard of "Smith, Stubbs, Darby & Co.," and doubted very much whether there was any such firm in Philadelphia. The next Saturday came, and Jake, thinking he might have misunderstood the day, went down again; but no Tafeu vessel had arrived. Jake now began to suspect he was sold, and scolded some, if not more. His golden visions became dim, as the weeks wore away, and no news came from Mr. Smith and the cargo of patent fertilizers. He has not heard from him since. Jake is particularly sore about this Tafeu business, and his neighbors, especially Jones and Tucker, when they wish to touch him on the raw, inquire for the price of the Philadelphia fertilizer.

Now, I suppose there are thousands of dollars taken out of the pockets of farmers in just this way every year. Some of these concentrated fertilizers I suppose are worth the money paid for them, but the chances are, that a man gets cheated when he buys them. This is pretty certain to be the case when they are bought of traveling agents like Mr. Smith. It is worse than highway robbery, for you do not know that you are robbed until the thief is out of your reach.

However, "there is no great loss but what there is some small gain," and Jake Frink claims that he has got his money's worth in experience. He says he "should jest like to see a man come along and undertake to sell him patent manure agin. Wouldn't he catch it?" Jake put into his yard last Fall double the quantity of muck I ever knew him to cart before, and, judging from the quantity of manure he has spread this Spring and plowed in, he will be a gainer by his experience. BEWARE OF PATENT MANURES.

Yours to command,
Hookertown, Ct., April, 1860.] TIMOTHY BUNKER, Esq.

A Talk about "Long Island Lands."

"Bogus Land Advertisements"—Discussion of defects in the subsoils of Long Island and elsewhere.

For some time past, there have been extensive efforts to bring into favorable notice certain tracts of land situated on Long Island. These efforts have consisted of advertisements in distant agricultural and other newspapers, correspondence referring to them, etc. More especial attention has been directed to advertising in the New-England States, and from that direction we are in the constant receipt of letters of inquiry. In our March number, page 91, we responded to one of these queries, intending that answer for a great number of others. Since then, *six different persons* have called upon us, each one of whom considered himself specially aimed at in our March paragraph, and each one protesting against it. The gun proved to be more heavily loaded, and to have "scattered" more than we anticipated.

In some quarters our motives have been impugned, and intimations of "prejudice," etc., have been thrown out. As we shall probably have more to say on this subject, let us premise here, that our *home* is on Long Island; that we expect it always will be there, as we hope never to "move" again; that we cherish a peculiar regard for the credit of our "adopted country" as a whole; that our only political aspiration is to be governor of Long Island, *when* it sets up for an independent State; that we desire to see the largest possible number of intelligent cultivators on our Island; that we will do anything and everything consistent with truth and honesty, both in our public and private capacity, to set forth the good qualities of every part of Long Island, and to defend it against the aspersions of all and sundry persons, whomsoever and wheresoever. We can not even think of a single motive, personal or otherwise, that would lead us to be "prejudiced" *against* a single foot of land on Long Island—if we have any prejudice, it is all the other way. After this general disclaimer, we shall hold in proper contempt all intimations of "prejudice" against our own chosen Island.

Here is the offending paragraph in our March number, which has been the cause of the dissatisfaction, expressed not only in a batch of communications now before us, but by those who have called to "set us right":

> "BOGUS LAND ADVERTISEMENTS.—W. F. B., "Franklin Co., Mass. We know little of the lands "you inquire about. There are doubtless some "chance plots which might be selected by a competent judge on the ground, but the good qualities of a majority of the magnificent farming "lands advertised there, and at other points at "the East, are *on paper*. It's all nonsense to talk "of large tracts of good land near New-York, "Philadelphia, etc., as having remained overlooked to this day."

We wrote the above in good faith, and we still stand up to it—it expresses exactly what we wanted to say, and what we still say. As we shall show further on, "there are chance plots of land" on Long Island which are now unoccupied, and which can be bought at a moderate price—a price below their real worth, considering their location and climate; and a "*competent* judge" going upon the ground, could make a selection that would be a capital investment. There are many such plots, but the proportion of good land to poor, is so small comparatively, that incompetent judges would be quite likely to be deceived in purchasing. We are of course speaking only of those portions of the Island now uncultivated. A considerable part of the Island is occupied by thrifty cultivators, especially on the north and south shores.

We have studied the geology of Long Island somewhat, and have personally examined the soil in some places—with the design of purchasing some of the "cheap land" for cultivation, if found worthy. The location is desirable, and the climate good, except for those predisposed to diseases of the lungs. Some persons of this class find the sea breezes not conducive to their health. But taken as a whole, the climate is genial and every way a desirable one.

There are many thousands of acres of land, particularly through the middle of the Island, which are as yet uncultivated wastes. Most of these are owned by individuals, in tracts of considerable extent, and the effort is being made to show that their good qualities have been overlooked, and that they are really valuable for cultivation. We wrote that "it is nonsense to talk of large tracts of land near New-York, Philadelphia, etc., as having remained overlooked to this day," referring to certain largely advertised sections east of Philadelphia, in New-Jersey, and also these Long Island lands now under consideration. This statement is a reasonable one. Long Island has been settled 200 years, and is it possible that the tens of thousands of intelligent, acute farmers, who have passed their lives upon the Island, living all around these uninhabited tracts, should not have discovered their good qualities in 200 years? The truth is, they *have* tried them again and again, and then passed them by.

Those who have written upon the Long Island lands, and talked of them at the so-called "N. Y. Farmer's Club," have too often formed their opinions from superficial observation. A stranger, going over these uncultivated lands, and looking at the surface only, would very naturally wonder why such soils should lie idle near the greatest market on the continent. But the trouble is *below* the immediate surface. Let us look into it.

During the past month we dug a cess-pool for draining. (This was cheaper and more convenient than to cut a deep drain across adjoining lands.) The first foot of surface was a good loam, mixed with organic matter. Below this we came to what is termed a hard-pan—a close, compact, gravely, clay loam, moist, but too compact to allow the water to pass readily through it. This layer extended for about 12 feet. Below this were 5 to 6 feet of more gravely soil; and at the depth of 17 feet we reached coarse rounded gravel, running into well washed coarse sand, as sharp and clean as the best sea-shore sand. It contained bits of woods and other remains, just such as we find upon the sea-shore.

A pail of water poured upon it, sunk out of sight in less than half a minute. We dug into this 6 feet, and found it perfectly uniform. We stoned up the excavation, and have no doubt but all the water from underdrains in the adjoining lands will be carried off. A well, near by, was sunk through this same uniform sand for a distance of 40 feet, when reaching the tide level, the sand was found saturated with water, and a permanent supply was secured, the water standing 60 feet below the surface.

Now on this land we have a bed of *water holding* soil, at least a dozen feet in depth. In hot weather, when the surface is dry, this water-holding bed supplies moisture from beneath. Without this source of moisture—this cistern, so to term it—the plants would dry out in hot weather, *no matter how good the character of the surface soil.*

The water is drawn up from the subsoil by capillary attraction, as it is termed. But if, for illustration, there were a thin layer of coarse gravel, one, two, or three feet below the surface, this water would not rise through it, because the tubes, that is the crooked interstices between the particles of soil, would be too large. Water rises by capillary attraction in small tubes only. If we had a good surface soil, then a thin gravelly bed, then a water-holding bed, we could break up the gravel, mixing with it some fine soil, and in this way establish a capillary connection between the surface soil, and the water-holding bed. There are many farms, both on Long Island and elsewhere, which are now barren, but which by the process indicated, might be made prolific.

About 20 rods from our cess-pool, a neighbor dug one on the same level of ground, but did not find sand until 25 feet below the surface. Eighty rods distant, sand was reached 12 feet from the surface. In our neighborhood the depth to the sand bed varies from 10 to 50 feet, all within a mile, and this on the same level of ground.

Now then, let us apply these illustrations to the waste lands on some portions of Long Island. The bed of sea sand and gravel described, extends under the whole, or at least under the greater part of the Island.* The upper surface of this sand bed varies greatly, in some places rising to the top of the ground, and in others it is at a great depth below. Within a single mile, the variation amounts to 40 feet at least, as is plainly proved in our own locality.

Again, there are, in many places, beds or layers of coarse gravel, interspersed *in* the water-holding soil itself. These also vary greatly in their depth below the surface. When they come within 2 or 3 feet of the top, the land is termed "leachy." Farmers say, manure does no good, "it leaches down and is lost." From what is above stated, it will be seen that it is not so much the leaching of the manure that renders them unproductive, as the want of a water-holding bed, to supply moisture when the surface is parched in Summer. The nearness of the general sand strata, or of a gravel or coarse sand bed, shuts off water from beneath.

The reasons for our remark that "there are chance plots which might be selected by good judges on the ground," will now be apparent. Those "waste lands" are variously made up. In some places the surface is too sandy for culture. In others there are large tracts, having apparently a good soil upon the surface, but not depth enough of water-holding soil above the sand, or above a gravel bed, to sustain the crops. But scattered over these, there are occasional spots, where the sand or gravel bed *dips down in a basin form*, leaving a thicker layer of good water-holding soil. And so we find many excellent farms, or garden spots, in the midst of surrounding sterility, when the superficial observer sees no reason why all the land, having a similar surface soil, should not be equally productive. Some persons are now buying these thin lands—to find out their mistake, when they attempt to cultivate them.

We once seriously thought of buying a farm, out towards the middle of the Island, on which the surface soil was excellent; and the season being wet, the crops then growing were good. We were disposed to attribute the bad reputation of the farm to bad cultivation. But before closing the contract, we took a spade in hand and dug "post-holes" here and there, which revealed a general gravel bed lying at a depth of 12 to 36 inches below the surface. Our knowledge of geology in that case saved us from a bad investment, and the loss of money and time. We have looked at this matter a good deal, aided by many communications, and many hours of time passed in conversation with those having land to sell. Our readers have the benefit of our own experience and observations. They can take our opinion for what it is worth—it may be wrong, but it is not over-hasty, nor prejudiced by any outside influences. We shall spend much time yet in investigation. If a tithe of what "they say" of Long Island lands be well founded, there is yet a mine of wealth in them; but we still think that while "there are doubtless some (we will say many) chance good plots," much of "the good qualities of the magnificent farming lands advertised there (on Long Island) *are on paper.*"

Making a City Grass Plot.

To the Editor of the American Agriculturist:

Here in the City we have but few green things at best, brick walls and stone pavements monopolizing most of the space. There is one little spot, however, which all housekeepers insist upon having, even in cities, and that is a snug little grass plot. This serves the double purpose of giving a green spot to relieve the eye—a luxury we citizens much enjoy—and also to give us a "bleaching" place for our linen. These grass plots frequently become so poor that they are of little value, and it takes some time to get a new one established from seed. In the country, fresh turf can easily be had, and a plot soon be made by sodding. Having had several run out beds renovated, with good success, I give my plan as follows: first remove what turf there is, laying it aside carefully; next spade up the bed thoroughly, working in some compost where it can be had. I then cut the old turf into pieces a few inches square, and set out all over the bed about one foot, or less, apart, covering with a very little soil. They root quickly, and soon make a compact turf over the entire space. I usually scatter a little lawn grass seed over the bed just before a rain, after the whole is complete. So well do I like the plan, that I should chop the turf up in this manner, even if I had abundance of it.

Brooklyn, April 14, 1860. HOUSEKEEPER.

Not too Late for Clover.

Although April is preferable for sowing clover seed in this latitude, it is better to try it even now, if done immediately, rather than lose the use of unoccupied ground, or suffer it to become a nursery of weeds. By sowing just before a rain, the seed is washed into the soil, and has a fair chance to germinate. Some object to sowing clover alone, because the full power of the sun destroys the roots, and it is therefore usually put in with grain, to secure partial shade; but in good soil the leaves soon spread enough to protect the roots. For turning under green to improve the soil, there is probably no crop superior to clover, and if wanted for this purpose there is yet ample time. There are hundreds of farms, now only an expense to their owners, that might in a few years be made to pay handsomely by the judicious application of clover seed.

Sheep Washing and Shearing.

To the Editor of the American Agriculturist:

Ever since I worked out by the month, I have had a dread of sheep washing, as it is usually done. A dam was thrown across a small stream, making a pond, and a pen for the sheep built by the side of it. We stood in the water waist deep, and took a half bath for two or three hours at a time; the sheep were thrown in heels over head, and soused, and squeezed until they were pretty well worried out. The water was not always comfortably warm, and we often had a blue and shivering time, notwithstanding the whisky and cider brandy which were poured down to keep the cold out, but which sometimes only drove the wits of the men out. I have now a much more comfortable plan. A large vat made of plank, about ten feet long, four feet wide, and three and a half feet deep, is placed near a stream where there is sufficient fall. Troughs are laid to conduct the water, with their lower ends standing about two feet above the vat. Two boys each have a sheep *soaking* at one end of the vat, while too men standing on the ground outside the vat, each hold a sheep under the stream running from the troughs. It requires but little squeezing of the wool and much less time, to wash them well, than by the old method. It dispenses with all rum, and consequently we have no *rumpus.*

After the sheep are washed, they are turned into a clean pasture, and not sheared until the weather is too warm for flannel jackets. The man that will send a poor sheep naked out into the chilling winds that often make fire necessary in May, ought to be put to sleep on frozen ground next Winter, with only a snow drift for bed clothes.

To shear a sheep well, requires practice and patience. A man in a hurry, ought to leave the shearing floor until his hurry is over, for he will be likely to butcher as well as shear the sheep, or else leave the wool in ridges like a new plowed field. To have the sheep quiet, keep him in an easy position; to cut the wool easily and even, let the surface over which the shears are passing be kept rounded out, and the skin drawn smooth.

My way is, to set the sheep on his hind quarters upon the floor, with his back towards the shearer. While in this position, the brisket, belly, and edges of the flank and thighs are sheared. Then the operator kneels on one knee, lays the sheep's neck over the other knee, and shears it carefully on the left side, up to the head. He then stands upon his feet, bends the sheep's head to the right side, and shears the fore leg and left side around to within one or two clips of the back bone, and so on to the thigh. The sheep is then laid on the broad side, the hind leg extended with the shearer's left hand, and the wool clipped from that and the buttock. The knee of the shearer laid over the sheep's neck keeps him quiet. The wool left while going down the back, is cut with clips lengthwise along the spine. The sheep is then set up again and the other side finished in like manner. All tag locks, burs, etc., should be re-removed before shearing, and the floor be swept frequently to keep straw or dirt from the wool. A very little carelessness will make a very great difference in the aggregate price obtained for the clips.

JONATHAN.

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* Long Island is about 113 miles long, from its most western to its most eastern point, and varies in its general width from 12 to 20 miles. It contains some 1448 square miles, or in all about 925,000 acres.

For the American Agriculturist.

Cure for Gapes in Chickens.

I have tried the following plan, and found it a certain cure for gapes in chickens. Take a medium sized broom splint, with a sharp knife make two or three barbs near the large end. Open the mouth of the chicken, having its neck drawn straight, and, as the wind-pipe is opened for breath, put in the instrument, and, running it carefully down the full length of the wind-pipe, turn it around and draw it up, when one or more small red worms, an inch in length, will be found caught in the barbs. I have taken out four worms at one insertion. Two or three operations are often necessary, but if faithfully performed, the remedy is sure. E. R.

Apoplexy in Fowls.

A subscriber writes for information about a disease which affects his fowls. The symptoms are loss of muscular power in the wings and legs, causing them to droop and stagger about, and soon to die. These appearances correspond to what is termed apoplexy, resulting from too high feeding. It is sometimes caused by confining the fowls to corn meal, or by feeding hemp seed and similar oily, hearty food, and is difficult to cure. A preventive is a change of diet. Give lighter grain, as oats, buckwheat, etc., and plenty of cabbage leaves or other green food, chopped fine, with milk curds, if they can be had.

For the American Agriculturist.

The Domestic Turkey.

Next to the common fowl, the turkey is the most useful, important, interesting and valuable, of domestic fowls. It is the most recent of our reclaimed birds; the care of it is quite an interesting part of rural economy; and it is generally admitted that turkeys are entitled by their appearance to be called the nobility of the poultry-yard.

Buffon remarks that it was unknown before the discovery of America. The Spaniards call it the "Peacock of the Indies," because its tail somewhat resembles that of the peacock when spread.

The domestic turkey differs in no way that I am aware from the wild, except in the variety of colors, which vary from a pure white, through all shades, to a jet black. Among the *full* colors, also, we have the buff or copper-colored, the slate or dove colored, which many prefer, simply I believe, as a matter of taste, as I have never discovered any superior merit either in the habits or flesh of such varieties. The dark colored, particularly the bronzed, are generally considered the best, hardiest and heaviest birds; the white variety the most delicate, and difficult to rear. These with their red head and caruncles, contrasted with their snowy whiteness make a very pretty appearance, and when feeding on the lawn add much to embellish the grounds around the mansion.

The dark varieties are always most marketable; their skin being white, and their flesh firm and sweeter; while the males are larger, and the females are considered much better breeders.

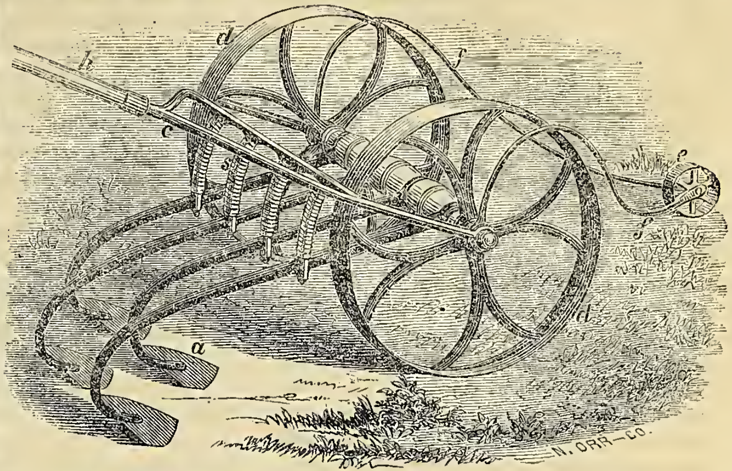
In rearing turkeys, the first great requisite is to have good stock to raise from, both male and female. The cock turkey should be of large size, and as he does not attain his full growth till he is two or three years old, one of this age is to be preferred, though yearlings are generally made to answer. The color should be jet black or bronze with legs to match. There is very little difficulty in finding a cock turkey whose strut is sufficiently martial to satisfy the most precise stickler for a military carriage. With tail spread and erect (as illustrated opposite), and breast inflated, he marches, and counter marches, a perfect Captain of the poultry-yard. Usually not more than three or four females should constitute his harem. A great point is to prevent deterioration of stock by breeding in-and-in. It is, therefore, good policy to introduce a cock-turkey from a neighboring stock at least every second year. A strong and healthy brood of chicks is thus secured.

The turkey is an out-of-door bird; and in this respect he retains, even in his domesticated state, that love of freedom which characterizes the Indian race of our country. The average size of the domestic turkey is about the same as that of the wild bird, but the former often excels in weight, when carefully bred. It is not uncommon for well fatted cocks, from seven to eight months old, to weigh from ten to fourteen pounds, and hens to weigh ten pounds. Cocks of one year old have been pushed to the weight of 25 pounds, dressed.

Po'keepsie. C. N. BEMENT.

Driving A Nail.

"A very simple operation which any fool can perform," says the reader. Not too fast. Scarcely one person in a dozen can drive a nail well. Of course, *practice* is essential to skill, but a little "gumption" is needed, and perhaps a little instruction may not come amiss. *First,* set the nail in all cases, so that its least width at the top stands across the grain of the wood. A carpenter would laugh at so simple a direction. but every second boy, and perhaps every third man is just as likely to set the widest part of the nail *across* the grain as with it, and thus split the wood. *Second,* a succession of light blows will often drive a nail home without splitting, when two or three heavy blows would split or crack the wood. *Third,* simply wetting a nail will often make it enter much easier. Oiling or greasing will do still better. *Fourth,* annealing or toughening nails so that they will bend, or clinch, is easily done. Some do this by heating them to redness on a shovel, and then pouring water on to cool them. This toughens them somewhat, but they are still better when allowed to cool slowly. The best plan is to make them red hot, and immediately cover them with ashes or dry sand, so that they shall cool very slowly. Common nails are cut when nearly cold. Heating and slow cooling afterward gives them a great degree of toughness, almost equal to that of wrought nails which are worked hot and cooled slowly. For all work, where the nails are to be subjected to bending, or to be clinched, they should be prepared in the manner described.



A New Onion Hoe.

Those who have cultivated onions to any extent, need not be told how laborious is the indispensable work of keeping out the weeds. With corn it is comparatively easy, with a few well directed strokes of the hoe, to cut them down, but when they intrude among the compact rows of onions, it is necessary to move carefully, working all the time in one direction, and even then to go down upon one's knees, and finish with the fingers. Many implements have been constructed to aid in this operation, but so far, cultivators depend chiefly upon a light-bladed, wide hoe. Mr. John Guyer, Fairfield Co., Conn., has shown us an implement of his invention, illustrated above, designed to work the ground thoroughly between the rows more rapidly and easily, than can now be done.

Four small pointed blades, *a*, are riveted to curved arms, which are attached to and play up and down upon the axle of the wheels, *d, d.* Two rods, fastened by nuts to the ends of the axle, pass up in front of the wheels, and are welded together at *c*; a shank drawn out from *c*, is riveted in the handle, *h*, only part of which is shown. A cross-bar between the point *c* and the wheels connects the two side rods, and from it four arms extend downward, each receiving one of the horizontal curved arms first mentioned, in a slot left for the purpose. Spiral springs, *s*, surround these slotted vertical arms, and serve to keep the hoes down to their place, but admit of either hoe rising to pass over a fast stone or other obstruction. Two small rods, *f, f,* play upon the ends of the axle of the wheels, *d, d,* and are curved to fasten upon the ends of the axle of the small wheel, *e*.

In working, the implement is pushed forward between the rows by the handle, *h*, the depth of the hoe furrows being regulated by lowering or raising *h*, thus increasing or diminishing the pressure upon the springs, which keep the hoes at their work. The wheel, *e*, two inches in diameter, passes under the onion tops that may have bent down over the rows, and they are pushed aside by the small rods, *f, f,* out of the way of the wheels, *d, d.* The inventor claims that at least four times as much in a day can be accomplished with it, as with the common hoe.

The implement is small and compact, two feet long, nine inches wide, the large wheels nine inches in diameter. The whole weighs about eleven pounds. The size, however, can be varied to suit different crops. It is drawn large in the illustration, to show the parts distinctly. The retail price, we believe, is five dollars. Mr. Guyer states that it was tested to some extent last season by extensive onion growers in Connecticut, several of whom have adopted it.

Clean Cellars.

One of the first duties of every householder, at this season of the year, is to clean his cellar. Decaying apples, cabbages and roots of various sorts, old beef and pork barrels, rotten boards and whatever else is subject to decomposition, should be gathered up and carried into the open air, or be put in a condition to produce no unpleasant effluvia. To sweep, dust, and bedeck the parlors above, is not enough. If there is corruption in the cellar, it will find its way among the carpets and rose-wood of gilded mirrors in all the upper rooms, making the air offensive and unwholesome. The occupants of a house are not so likely to notice these smells as their visitors.

Now, to avoid all this, begin the month of May by a thorough purification. Throw open the doors and windows of the cellar, and clear out all decaying matters. Sweep the floor and walls. Give the walls a good coat of whitewash; this will extirpate vermin, sweeten the air, and give the cellar a neat and tidy look, making it rival the parlor in its way. If provisions, or other substances liable to decay, have to be kept in the cellar during the Summer, chloride of lime should occasionally be sprinkled over the floor. Keep the windows open for a free circulation of air, guarding them if necessary, by a wire netting.

Deep or Shallow Vessels for Milk.

To the Editor of the American Agriculturist.

Many suppose that the quantity of butter obtained from milk depends greatly upon the treatment before churning, particularly upon the kind of vessels it is kept in. Thus some prefer deep pans, and some will use none but shallow; some add saleratus to the milk to keep it sweet longer to give the cream more time to rise. Experience has convinced me that the amount of butter depends on the quality of the milk, rather than on its management. All the butter contained in the milk can be obtained, and no more. I remember fifty years ago that my father, who had thirty or more cows, tried several experiments to ascertain this point. He first procured large flat "keelers," 'wooden tubs about four inches deep,' but the labor required to keep them sweet was so great that a number of twelve-quart tin pans were also used. There was no difference in the amount of butter obtained from each. After this he was persuaded to have smooth oak tubs made, each holding about four gallons, having been told that the milk would remain sweet much longer in them and the cream would be increased, but there was no improvement in the quantity. I have for years used twelve-quart tin-pails for convenience in handling, and find by keeping the temperature right to allow a moderate cooling and a gradual rising of the cream, I get all the butter there is in the milk, which is the best any plan can do.
A. B. C.

Chemung Co., N. Y.

Dangerous Cattle Disease in Massachusetts.

An infectious, and in most cases, fatal form of pleuro-pneumonia (inflammation of the lungs), has been for some time prevalent in Massachusetts, near Boston. It first made its appearance among an importation from Holland, which arrived at Boston in May of last year. There were but four cows imported, and all were in an enfeebled state when they arrived. Three of them have since died, while the fourth did not take the disease. The owner of them, Mr. Chenery, of Belmont, not thinking the disease infectious, used no special pains to prevent its spreading among his other stock, which took the disease from time to time, until he has lost 27 head.

Mr. C. sold some calves, which were taken to North Brookfield upon the farm of Mr. L. Stoddard. The disease soon showed itself there, and up to March 20th, Mr. S. had lost 11 head, and had 8 more on the sick list. From these cases the disorder spread among neighboring herds, and extended into one or two adjoining towns. For instance, a pair of working cattle, which had only a slight cough, were put into a barn with other stock, and communicated the disease to them. Some have escaped when apparently exposed to the infection.

In view of the immense loss likely to result from this disease, the Legislature of Mass. has passed an act appointing commissioners to visit those places where it prevails, estimate the value of animals which have been exposed to it, kill and bury them, and cleanse the premises. Such stock are to be paid for out of the public treasury. The act has already gone into effect, and is to continue one year.

Deep Plowing and Good Corn.

To the Editor of the American Agriculturist:

In the Spring of 1859 I bought 80 acres of land for $25 per acre, on which the former owner could not make his living—he never plowed more than three or four inches deep. I will give you the result of deep plowing and well tending fifteen acres of corn:

		Dr.
Breaking up ground 8 days—$1.50 per day		$12 00
Marking out to plant		2 25
Planting, 1 day, 2 men and team		2 25
Seed, 2 bushels, at 75 cents		1 50
Plowing three times, $1.15 per acre		17 25
Replanting, 1 day and 1 bushel of seed		1 50
Gathering 800 bushels corn at 3 cts		24 00
Feeding 60 bushels to hogs		1 80
Interest $3, taxes $37.50		40 50
Total cost		$103 05
	Cr.	
800 bushels corn at 37 cts. per bushel	$296 00	
1,900 lbs. pork at $5 per cwt	95 00	—391 00
Leaving as profit		$287 95

So much for the *Agriculturist's* teachings on deep plowing and worn out farms. It will be seen by the above figures that corn can be raised very cheap in Illinois—about 10 cents per bushel.
SUCKER.

Hancock Co., Ill.

Potatoes with Sea Weed and "American Guano."

To the Editor of the American Agriculturist:

Having seen it stated that sea weed would prevent potatoes from rotting when placed in the hill, I resolved to try the experiment. The soil was loam inclined to clay, with a hard pan subsoil. The ground was plowed flat with no manure, and marked out two feet nine inches each way. Each row contained 40 hills. I also tried experiments with American Guano at the same time. The guano was mixed with about its own bulk of Plaster of Paris, and applied in the hill. Rows No. 1 and 2 received guano at the rate of about 250 lbs. to the acre. Nos. 3 and 4 nothing. Nos. 5, 6, 7, 8, first guano, then a large handful of sea weed dropped on it, and then the potato on that. Nos. 9, 10, 11, 12, with American Guano, the same as Nos. 1 and 2. Nos. 13 and 14, received sea weed but no guano. Nos. 15 and 16 had the guano under the potato and sea weed on the potato. I planted the Mercer variety and they rotted very badly. At digging time I could see no difference between any of the rows.

Fairfield Co., Conn. D. H. Sherwood.

Orchard Grass.

This species, sometimes called rough cocksfoot, and known botanically as *Dactylis glomerata*, is by many considered a very valuable grass, but has not become as popular among cultivators as Timothy.

It has in its favor its rapidity of growth, ability to endure drouth, large yield of fodder, and permanence; to which may be added that it bears shade well and is thus adapted for orchards, its name being derived from this characteristic. On the other hand, it is coarser and more harsh than Timothy, is less nourishing, and is apt to grow in tussocks or clumps instead of covering the ground evenly. Conflicting accounts are given of the relish with which it is eaten by stock, some declaring that sheep, especially, prefer it to all other sorts; others say that it is neglected when other kinds are at hand. All agree that it should be kept cropped short. When intended for mowing it is advisable to sow it with clover. It blossoms at about the same time with red clover, and is thus fit to cut before becoming too rank. One bushel of seed to the acre with clover, or two bushels when alone, is the quantity usually sown. It may be put in during September, or sown with Spring grain. A very light bushing to cover it, is sufficient, experiment having proved that the greatest number of seeds germinate at a depth of from one fourth of an inch to no covering at all, but merely lying on the surface. It is well known that the quality of grass depends much upon the location, character and management of soils, etc., and to this fact undoubtedly is due the difference of opinion respecting its value. Experiment has shown that in many sections it is inferior to Timothy particularly for meadow, still, under other circumstances, it may be preferable.

That Dwarf Broom Corn.

In our last, page 104, we referred to a Dwarf Broom Corn, of which we have specimens from Mr. Good, of Pennsylvania. Before us is a letter from a subscriber, L. J. T., of Lambertville, N. J., in which he states that it has been grown to some extent in that region, and he does not appear to esteem it very highly. His description of its form and growth corresponds to that of Mr. Good. He says "it grows short and stocky; the brush stalk is enclosed in the leaf sheath, which also covers about half of the brush and prevents its bending down, and therefore no bending down of the heads is required. The brush is finer and longer than the common kind." He objects to it, that it is nearly all the way of a thickness and renders the broom too limber. We are not certain that this is a defect. The most serious objection offered by Mr. T., is the difficulty of harvesting and cleaning the brush. He says: "The stalk is close jointed, the space between the joints being about six inches, and the leaf springing from each joint extends over and covers the next, making it difficult to see where to cut off the brush stem. The cutting must be made near the upper joint, to preserve length enough, and if the cutting chance to be below the joint, it is troublesome and wearing to the fingers to strip off the upper leaf that partly surrounds the brush." Further trial may show these objections to be valid, but the dwarf character of the plant, and its long, fine, even brush are so much in its favor, that we still think it may, on the whole, be found superior to the old variety.

Blinks from a Lantern......XIX.

BY DIOGENES REDIVIVUS.

FARMERS IN THE TWENTIETH CENTURY.

Not having had very marked success in my late explorations I purpose to vary my method a little, and look into the future history of your planet for a farmer. It is possible that that character may now exist, in some out of the way place, and that we may yet fall upon him in our travels. But for the present, let us look in upon the grandsons of the generation now upon the stage. The mirror that I hold up before you, contains no optical illusions. The pictures are things.

It is a May morning in 1910, and we are looking out upon a New England landscape. I see you hardly recognize the country, it has undergone such a change. You are astonished at the increase of woodland, and at the different location of forests. When the country was first settled, the high lands were cleared, and the dwellings were put upon the hills. Of course, the roads had to go winding up the steep ascents, and the clearings were made from the top downward, until nearly all the high lands were stript of their forests. This policy was, perhaps, a necessity, from the fact that these locations were less liable to chills and fever, a disease that afflicts all new clearings in the woods. It was certainly in violation of all taste and utility that a country should be thus settled. The forests and most rocky lands are found upon these ridges, and this is the most fitting place for forests, both for beauty and for usefulness. They then break the violence of prevailing winds, distribute the showers more equally, and crown the mountains with a glory peculiarly their own. But, see, time has changed these mistakes of the fathers. The roads now wind along the hill side, and through the valleys, and every neat white cottage and farm house has its back ground of meadow, orchard and woodland. The swamps, swales and marshes, that once only bred mosses, brakes, sour grasses and reptiles, now present one broad expanse of meadow, the most profitable lands upon the farm.

Another striking change in the landscape is the disappearance of the stone walls, and the zigzag fences that used to enclose every two or three acres of land. "Pray, what has become of them?" They have literally gone under, submerged by a higher civilization. You miss them at the road side in many places; for the highway has become purely a matter of public convenience, and the man who should attempt to turn it to private advantage by pasturing, would be booked out of good society. The lands you see are only inclosed for the advantage of the owner, and not to guard against the tresspass of the public. Some farms have only a few inclosures near the house, and all the rest of the land is free from obstruction. "But what has become of the stones?" Look down there at the foot of the hill, and you will see breaking out every few rods a vigorous stream of water, and running off into the brook. More than half of the land is threaded with these hidden drains, and the stone walls you miss, have gone down to guard the water ducts, instead of guarding the crops against cattle.

"But, look here, O! Diogenes, what is that strange apparatus upon the meadow, that seems to be a cross between a locomotive and a big yellow dog, throwing out the dirt behind it in a shower? Have the people done with plowing!" The plow is an exploded idea, belonging to rude husbandry. The machine you see, is the patent sod rasper, driven by a caloric engine, doing up the work of the plow, the harrow, and the bush, at one operation, and leaving a seed bed over a foot deep, of a finely comminuted mass of soil. At an expense of five dollars a day for coals and attendance, it rasps up eight acres of meadow, preparing it for planting better than was ever deemed possible in the last century. The drill is hitched on to the engine, when the rasping is done, and twice the quantity of ground is planted that can be rasped in a day.

"But what does it mean that so much more of the land seems to be under cultivation?" You will notice, if you look on a map, that the cities are much larger, and the villages are very much more numerous than formerly. The population is quadrupled, and this fact has increased the breadth of land under tillage, though the product of every acre is more than doubled. The consumption of the products of the farm too, is greatly increased by the ability of the people to consume all they desire. If you could look into the larders in the villages, you would find them all well stocked. The almshouses are still left, but they have few tenants, except in the large cities where too many emigrants remain.

A little later in the season, you will see this same engine hitched to the reaper and mower, and doing about twice the work that was accomplished by a span of horses in the last century. The farmer only cuts grain and grass in the few days when they are in the best condition for harvest. He has these operations completely under his control, and nothing is lost from an unseasonable harvest.

"As so much labor is done by machinery, what do men find to employ themselves about?" Much more time is spent in intellectual culture than formerly. The course of study in the schools is greatly enlarged, and the farmers' sons are not confined to the rudiments of education, and sent out to seek their fortunes at the age of sixteen. Husbandry is no longer a rude struggle of muscles with the reluctant soil. Mind rules every thing in the shop of the artisan, and in the field of the husbandman. The esthetic nature of man has waked to a new life, and the fine arts are patronized to an extent never dreamed of a hundred years ago. Enter any of those farm houses that sit smiling yonder upon the hill side, amid their orchards and flower gardens, and you will find them more sumptuously furnished than the dwellings of the citizen in the last century. The parlor, you see, is a much frequented room. Here are fine carpets, a piano *that goes*, walls hung with engravings and paintings, a center table well furnished with papers and magazines that are read. In the room back there, you will find the farmer's sanctum, dignified with the name of library, the book cases well filled, the writing desk not yet put to rights by the good wife, looking somewhat like an editor's table. Upon my word, here is your old favorite, a venerable Nestor among journals, *American Agriculturist*, May, 1910. May its shadow never grow less.

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Nothing so much prevents a person from being natural and easy, as an extreme anxiety to appear so; the self-possessed only are graceful.

Every condition has its own difficulties.

How much Seed per Acre?

This question can be answered only approximately. A table giving a fixed invariable quantity would often mislead for the reasons that quality of soil, method of cultivation, climate and location, all vary the certainty and manner of growth. Where, for any reason, it is difficult to make seed "take," it may require an addition of as much as twenty five per cent, or one peck to the bushel. Again on very rich land, where grain would tiller exuberantly, it is the practice to diminish the amount sown. With crops like roots, onions, etc, where thinning is practicable, it is advisable to sow liberally enough to allow for this. Individual judgment must be exercised. The following table republished from Vol. XIV, in answer to a call from many subscribers, shows the smaller and larger quantities usually allowed to the acre.

Barley, broadcast, 1½ to 2½ bushels; in drills, ¾ to 1½ bushels. Beans, 2 to 3 bushels. Beets, 3 to 5 lbs. Buckwheat, 1 to 1½ bushels. Carrots, 2 to 2½ lbs. Corn (Indian), ¼ to 1½ bushels; Broom Corn, ¾ to 1¼ bushels. Flax, for seed, ½ to 1 bushel; for fiber, 1½ to 2½ bushels. Grasses—Red Clover, 10 to 16 lbs.; White Clover, 4 to 8 lbs.; Blue grass (Kentucky), 10 to 16 lbs.; Red Top, 12 to 18 quarts; Orchard grass, 20 to 30 lbs; Timothy (Herds grass), 12 to 18 qts. Hemp, for seed, ¾ to 1 bush.; for fiber, 1 to 1¾ bush. Millet, 1 to 1½ bush. Mustard, 10 to 20 qts. Oats, 2 to 4 bush. Onions, 4 to 5 lbs. Parsneps, 3 to 6 lbs. Peas, in drills, 1¼ to 1¾ bush.; broadcast, 2 to 3½ bush., according to the size of seed. Peanuts, in hills or drills, 1 to 2 bush. Rye, in drills, ¾ to 1 bush; broadcast, 1 to 2 bush. Turnips, 1½ to 2½ lbs. Wheat, in drills, ¾ to 1¼ bush.; broadcast, 1¼ to 2½ bushels.

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For the American Agriculturist.

Liquid Manure for the Garden.

Every man who has a sink spout, has a fountain of wealth at his back door. You laugh at the idea, for you have never tried it. Make the experiment, and you will laugh at your own simplicity for overlooking a stream that abounds with gold dust, as really as Pactolus. The application of liquid manure to meadows, on farms may be at some distance in the future, but for its use in gardens the time has already come. A good many laborers, mechanics and villagers are already trying it, and finding it just the thing.

If you have nothing better, sink a half hogshead a foot or two in your garden, in the most convenient place, and run a leader from your sink spout into it. A watering pot is the best thing to put it on with, but not at all essential. An old pail and dipper, kept for the purpose, will answer. When the plants are well up, and begin to grow nicely, apply the liquid two or three times a week, just at night. It is excellent for vegetables and the small fruits, and for grapes and pears, until they begin to approach maturity. It not only increases their size, but improves their flavor.

GARDENER.

Remarks.—In Vol XVI., p. 157, we gave a full description of our own method, and of the great benefit derived from the use of sink slops, wash water, etc. In a corner of the garden we sunk a large hogshead even with the surface, and built a square box over it with a hinged lid to raise up for dipping out the liquid with a paint tub. On our present place we shall save all such material in a stone manure tank, partly under the stables, and partly in the yard, to be used as needed.—ED.

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Every man is the architect of his own fortune.

Microscopic Views of the Insect World. III.

BY MRS. CHARLOTTE TAYLOR.

THE LADY-BIRD—*Coccinella Platicentra.*

Let me now introduce to you one of your greatest friends. Examine her well, so that she may henceforth be known as such, and not classed among your enemies, which I am sorry to say is often the case. What the dog is to man among quadrupeds, faithful and honest, this little lady-bird is among insects—ever near his dwelling, always at work in his service. She brings the first news of the advent of Spring, and is one of the last to leave us when dreary Winter wraps us in his mantle of snow.

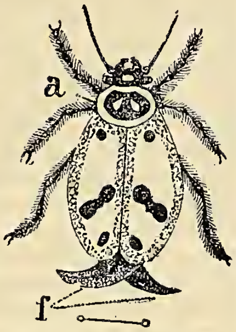


Fig. 1—*a*, Coccinella Platicentra, (Lady Bird.) *f*, point of the wings.

She belongs to the second family of Latreille's Coleoptera Trimera; so called from having only three ordinary joints in the tarse or foot, (*b*, fig. 2); the body is convex, and nearly hemispherical; antennæ, eleven jointed, rather short, clavate or terminating in a reversed conical club, (*c*, fig. 3); mandibles (jaws) acute; thorax short. The under-wings, (*e*, fig. 5), are very much *smoked*, as entomologists say, by which is meant they have the appearance of having undergone this operation. It is marvelous how they are folded up in such a small compass; the points pass over each other as you perceive, (*f*, fig. 1), and under the opposite wing case, and when expanded, are nearly double the length of her body, (*g*, fig. 7). It is necessary they should be so, as she is so solid. There are a number of varieties; we count more than a hundred in this country. Some are very prettily colored, bright red, yellow, and white, with black spots, and sometimes black with these spots reversed. She and her larvæ (or children) feed on the Aphides or plant lice alone; so you may perceive how precious they should be to us. You will find her eggs deposited on the same leaf where those of the Aphis are placed. The circle of her bright yellow, flat and oval eggs surrounds those of the plant louse, (*h*, fig. 6). They hatch nearly at the same time, and if you can not imagine what a number of wolves might be in a flock of sheep, place a magnifier over a leaf on which these insects are found, and you will see carnage and havoc beyond my describing. It is at this stage, (*i*, fig. 8), that they are most active, and destructive to the lice. It seems impossible for them to have a surfeit; their appetite is insatiable. But after changing their skins several times, even they must rest for awhile. The larva glues itself by the tail to a stem of the plant it is on, and gradually contracts itself into a pupa. In a day, or more, according to the weather, the skin splits, and an ugly, deformed, broken backed pupa may be seen still secured to the old skin, (*j*, fig. 9). It has all the rudiments now of the mature Lady-Bird—wings, and legs—but can not move or take nourishment. In a few days more, this skin bursts, and the perfect Imago (winged insect) makes its appearance, soft and moist, and very black, but as the air dries her, her wings and bright colors come out vividly, and she appears the pretty little gem with which Nature adorns herself. Her food is the same, she has the same propensities, but is rather lazy. She does not hunt so eagerly, but places herself in the midst of plenty, and enjoys it. You perceive her mandibles (*d*, Fig. 4), are well fitted for her vocation. They act like wedges, and the crushing of these soft little bodies is soon accomplished. When her prey is exhausted, she moves leisurely away to another nursery of her pulpy victims. She will live two seasons feeding thus, hybernating in some secure corner during the Winter. Now is she not a beneficent little Lady-Bird—and yet through ignorance, thousands are murdered every season. I have here illustrated rather an uncommon variety, (*a*, fig. 1,) and have named it from the plants whose aphides it feeds on. The elytra or outside wings are of a bright orange color, with the spots black. It came from the pupa case early in May last, was placed under a glass, and fed with the Aphides from the plant Cuphea Platicentra, and lived happily in company with a small black and brown spider, the Epeira Aphites whose food is likewise plant lice. It was a curiosity to many persons to see the affability and apparent friendship existing between two insects, which one would suppose so very uncongenial. They would feed at the same time from the same leaf; they could often be seen reposing side by side, and the harmony and understanding between them was most complete. Last October, returning from a walk, I brought with me a fine specimen of Spring beetle, the Elater Oculatus; being in haste, I placed it, for the time, under the same glass with the friends. I had quite forgotten the circumstance, and at near bed time I went as usual to see how my large family was thriving, when lo! the poor Lady-Bird was swinging at the top of the glass, and her friend winding her up higher and higher. They had not been very plentifully supplied that day, and I came to the sorrowful conclusion, Nature was inexorable, and that here was the end of this charming episode. I am ashamed to say how grieved I was at such an exhibition, although it was only what might have been expected. I hastened to remove the Elater, leaving the supposed murderess to finish her repast at her leisure. But next morning, the friends were as well as ever at the bottom of the glass, waiting for their breakfast, and no doubt quite jolly over the fright of the previous night.

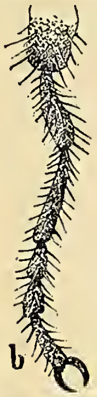


Fig. 2—Leg and foot, magnified.

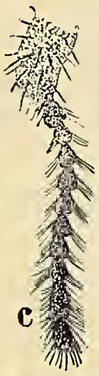


Fig. 3—Antennæ magnified.

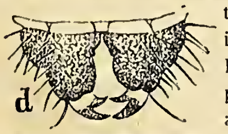


Fig. 4—Mandibles, magnified.

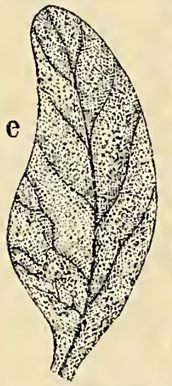


Fig. 5—Under wing, magnified.

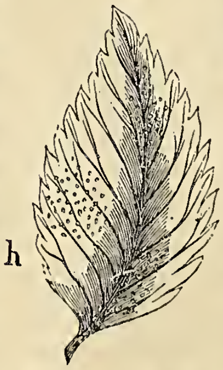


Fig. 6—Leaf with eggs.

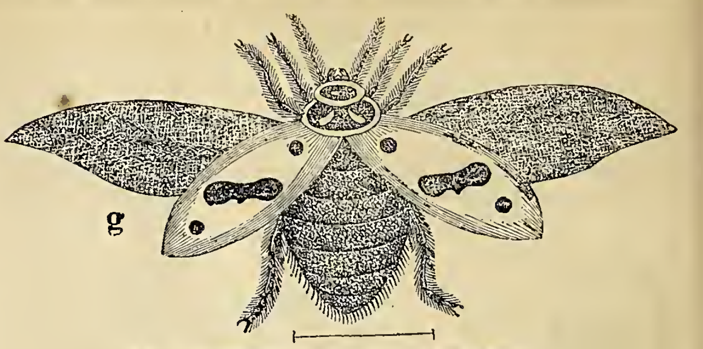


Fig. 7—Coccinella (Lady-bird) in the act of flying.

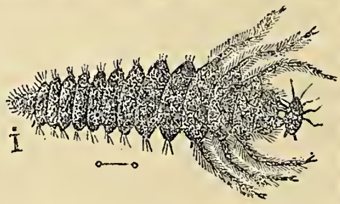


Fig. 8—Larva eating an Aphis.

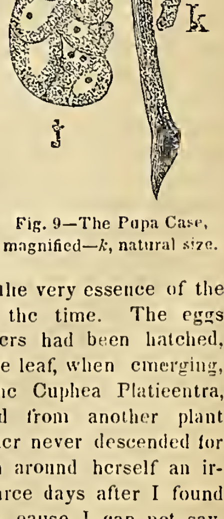


Fig. 9—The Pupa Case, magnified—*k*, natural size.

What do you say to this? Is it reason or instinct? I see in my vocation so many such exhibitions, I fear to give latitude to my convictions, therefore you must draw your own conclusions. The spider evidently felt, or thought, her friend was in danger, and so lent her aid to raise her out of reach of the beetle, and each time a larger insect was placed with them, you would soon find the Lady-Bird at the top of the glass. But let me tell you the end of all this. In January, the Aphides were all exhausted on my plants, and I went up to the hot-house of a friend, where I found a full supply upon a plant belonging to the Hibiscus family. I returned, happy at my success, and placed a leaf covered with these dainties before my little pet, and next morning found her *dead.* Mark this beautiful provision of Nature. I had tested it often, and yet at the moment it had quite escaped my memory. The Coccinellidæ can be fed upon any variety of Aphides, provided the eggs are hatched together on the same plant, but take the larvæ or perfect insects, and feed them on Aphides from another plant, even if it is the same species, they will die immediately, a convincing proof how thoroughly the Aphides imbibe the very essence of the plants they feed on at the time. The eggs from which she and others had been hatched, although laid on a rose leaf, when emerging, found themselves on the Cuphea Platicentra, and the change to food from another plant killed my pet. The spider never descended for food after this; she spun around herself an irregular loose web, and three days after I found her dead, but from what cause, I can not say, as I never have as yet tried this experiment upon any of the spiders which feed alone on plant lice. This is the reason they are found emigrating in flocks from field to field in search of the food they had fed on in the larvæ state. If it is upon the hop, they will leave the rose and seek it, and they will shun the rose and seek any other on which they had fed when larvæ. They are not found emigrating so much in this country as in Europe—food is too plenty as yet. I once met a flock in North Carolina. There had occurred some accident to the previous train, and we were detained on the road. I spent two hours assisting at this flitting of some hundreds across the road from one field to another. The one they had left was green and flourishing from their presence—the other required it sadly, falling rapidly into the sere and yellow leaf. I was happy to have secured the last little emigrant before I resumed my travels.

Towards Winter you will find them clustering together, hibernating in old palings, old posts, and under the eaves of green-houses. What a treasure they might be to the florist, if caught in Summer, and fed regularly until the conservatories and hot-houses are closed for the season, then their liberty being given to them, they will keep the Aphides subdued if not entirely exterminated.

There is a positive remedy always at hand; the good is placed in juxtaposition with the evil, by the Creator, and it is the part of wisdom to discover and apply the help so provided. May I hope that henceforth you will estimate this valuable little creature more highly than before, understanding that her mission, most faithfully performed, is to "Cleanse the *foul* surface of the *infected* leaf."

For the American Agriculturist.

How to Conquer the Red Spider. (*Acarus Telarius.*)

Mr. Editor: Your correspondent "Enquirer's," account of his long and fruitless battles with this pest of the green-house, entitles him to sympathy and assistance. However strange it may seem that the fumigations, syringings, and resentful poking of sticks at the intruder have failed to dislodge him permanently, it is not surprising when we learn that he is enveloped by a water-tight jacket, a perfect life-preserver on which such treatment has as little effect, as the rain upon a sailor's tarpaulin. We can fancy the insect laughing in his sleeve, as he lay snugly ensconced, while "Enquirer" was pouring out his indignation. Permit me to introduce to him an ally, who, though unprepossing in appearance, will do him good service. The Shepard Mite Spider (*Phalangioide acarinia,*) better known to most persons as "Daddy Long Legs," is the natural enemy of the "Red Spider," not from any hatred, for he loves him well enough to eat him up, which he does whenever he can find him. Almost every child knows this insect with his little body, and long, stilt-like legs, with which children direct him to "tell which way the cows are." He is a singular creature, with eyes on his back, enabling him easily to discover his prey on the under side of a leaf above him, and having long, slim mandibles (jaws), he sizes his prey as handily and as firmly, as a dentist would take a tooth with his forceps, and with just as little mercy. If during the Summer a supply of these be obtained and domesticated upon the infested plants, they will wage a warfare to some purpose, to the great delight of the plants and their owner. They may be found early in Spring under the eaves of hot-houses, and near old caterpillar nests, where they hibernate. They may be shy at first, but are easily tamed by kind treatment, which they will well repay. Amicus.

For the American Agriculturist.

Death on Lice.

It is not always poor cattle that become inhabited with these parasites. Fat cattle, owing to foul stalls or some other cause, are occasionally caught with the pests. Some apply *Unguentum* or Mercurial ointment, which, to be sure is death on the lice, but also, not unfrequently, death on the cattle. It is an active poison when taken into the stomachs of cattle, as it is sure to be, if put within reach of their tongues. It should never be used. Others resort to tobacco, a safe remedy, but still injurious oftentimes to the animal. The only effectual remedy, that is at the same time safe, which we have ever tried is oil, or grease. These parasites lay their nits upon the hair, and it is only when the hair is dry, that they can make the eggs adhere. If the hair be kept well lubricated for a few days with sweet oil, or any kind of grease that will not become sticky, the insects will decamp for dryer quarters. They attempt to climb the greased poles and give up in despair. Armed with an oil bottle you may effectually rout the enemy, without risking the health of your cattle. Connecticut.

Sulphur for Sheep Ticks.

Wm. P. Chase, writes to the *Agriculturist*: "In the Jan. No., p. 27, I notice a doubt as to the efficacy of sulphur to expel ticks from sheep. I have no doubt. I *know* it will do the thing much more efficaciously, and with much less injury to the sheep than the nauseous mode I have practiced of dipping them in a decoction of tobacco, cicuta, etc. Since 1844 I have used no other preventive to keep ticks from sheep, or lice from cattle. My mode of feeding is to have boxes about 1 by 1½ feet square, with sides about 3 inches high; mix as much flowers of sulphur with salt as can be made to stick to it, and put in the boxes, for sheep or cattle. Feed it any time, but particularly in warm weather. Since 1844 I have seldom found half a dozen ticks to the hundred sheep at shearing time, and some seasons none.

I *think* feeding sulphur a great help in keeping clear of the foot-rot. My sheep have neither ticks nor foot-rot, although there is much of it near, and around me.

What Shall be Done with the Dogs?....I.

DOG LAWS OF RHODE ISLAND.

Not long since, a large farmer in our own town, one of our most worthy citizens, was bitten by a dog, and died a distressing death by hydrophobia. We never pass his house or remember his lonely widow and orphan children, or think of his loss to the country, without instinctively estimating how much greater the value of that one life, than of all the dogs in the land. We grant that sometimes a life has been saved by a dog, but such instances are so rare, when compared with the deaths by hydrophobia, that they are not worth taking into account. And of what utility are nineteen out of every twenty dogs in this country? It costs nearly as much to keep a dog as a hog. What an addition to the wealth of the country, if five millions of dogs were replaced by as many hogs. But these general considerations aside, we now refer more particularly to the loss to our productive industry by sheep-killing dogs. We have published many articles showing conclusively that raising sheep is one of the most profitable departments of husbandry. But from every part of the land come back responses like these:

"What's the use of all your facts and logic? We can not keep sheep, unless we provide a shepherd to watch over them night and day. What's the use of expending hundreds of dollars to gather a flock of improved sheep, when, in a single night, you may lose twenty per cent of them by some marauding dog, whose owner can not be found, or if found, ten to one he is irresponsible—his chief property, perhaps, being the miserable cur that did the damage."

We say such responses come from all parts of the country. Who has not, in his own observation, proof that these complaints are well founded. We can point to a single town, within 50 miles of this city, where sheep raising was commenced a few years ago on a large scale, and with great profit. But now, not one farmer in twenty five keeps a single sheep; and the *only* reason for giving up sheep raising was the frequent ravages of dogs.

We purpose to devote some space to this subject, and will be thankful for any information that will throw light upon it. If farmers fully appreciated the actual condition of things—if statistics could be gathered of the loss suffered by dogs during the last dozen years alone, and the public were aware of the fact that the number of sheep in our country could be doubled during the next dozen years, were there perfect security against dogs, we have no doubt there would be such a general excitement that our State Legislatures would be compelled to pass the most stringent laws that could possibly be enforced.

Perhaps it may be well to give the laws recently enacted by three or four States. A correspondent has recently favored us with a copy of the laws just passed in Rhode Island, which go into effect the first day of this month (May). The law is good so far as it goes, but is not half stringent enough. [Will some one oblige us with a copy of the present laws of Massachusetts, Maine, etc., on the subject.]

STATE LAWS.

State of Rhode Island and Providence Plantations. In General Assembly, January session, A. D. 1860.

AN ACT in amendment of chapter 82, title XIV, of the Revised Statutes, "Of Dogs."

It is enacted by the General Assembly as follows:

Section 1. Every owner or keeper of a dog shall cause such dog to wear around its neck a collar with the owner's or keeper's name, or the initials thereof, distinctly marked thereon; and any person may kill, or cause to be killed, anywhere out of the enclosure of its owner or keeper, any dog not so collared.

Section 2. Every person keeping or harboring in his house, or on his lands, any dog, or knowingly suffering the same to be done by any other person, shall be liable for all damages done by such dog, in the same manner as if he were the owner thereof.

Section 3. Any person may kill any dog that may suddenly assault him, or any person of his family or in his company, while anywhere peaceably out of the enclosure of the owner or keeper of such dog; and any person may kill any dog that may be found, out of the enclosure of its owner or keeper, worrying, wounding, or killing any neat cattle, sheep, or lamb, not the property of its owner.

Section 4. If any person, or any member of such person's family, shall be assaulted by any dog, out of the enclosure of its owner or keeper, or if any person shall have reason to believe that such dog will, out of such enclosure, probably do any injury to his person, family, or property, and shall make complaint, under oath, thereof to any justice of the peace in the county, such justice shall give notice, by warrant or summons, of such complaint to the owner or keeper of such dog; and if, on examination, the justice shall believe that such assault is proved, or that the complainant has reasonable ground for his fears, he shall so adjudge and shall give written notice thereof to the owner or keeper, and such owner or keeper, shall forthwith confine or kill said dog; and if he neglect to kill him or keep him confined, he shall forfeit the sum of ten dollars, to be recovered to the use of the town, before any justice of the peace or court of magistrates, and any person may kill said dog. And if after such notice, such dog shall wound or injure any person, or shall, elsewhere than on its owner's or keeper's premises, worry, wound, or kill any neat cattle, sheep, or lamb, or do any other mischief, the owner or keeper shall be liable to pay to the person injured treble damages therefor, with costs. And in all cases of the complaints under this section, recognizance shall be given for costs, and the fees and costs shall be the same as in other cases of complaints before justices of the peace.

Section 5. Every owner or keeper of a dog shall cause a particular description of such dog, embracing all the natural and artificial or accidental marks of such dog, to be registered in the town clerk's office of the town where he resides, in a book to be specially kept for that purpose, and shall pay to the town clerk ten cents for his fee for every such registry ; and any person may kill, or cause to be killed, any dog going at large not so registered ; and whenever the description or marks of any dog are substantially changed, he shall be registered anew.

Section 6. Nothing in this act shall be so construed as to repeal any ordinances concerning dogs, not inconsistent with the provisions hereof, which have heretofore been passed by the town councils of several towns, or the city councils of any cities.

Section 7. The town of New Shoreham, shall be exempted from the provisions of sections 1, 2, and 5 of this act.

Section 8. This act shall take effect from and after the 1st day of May, A. D., 1860.

A true copy—witness : JOHN R. BARTLETT,
Secretary of State.

For the American Agriculturist.

Horses need Air and Light.

If anything can be done to add to the comfort and health of the horse, no animal deserves more to have such an effort made. Our stables should be constructed with special reference to his comfort and health, and to these all other accessories must yield.

Our fathers' and grandfathers' barns were of the wide, old fashioned sort, with all manner of loop holes and air holes—between the vertical boarding you could put your whole hand. They were originally tight, but when well seasoned, there was light without windows, and the pure air circulated freely : here was perfect ventilation, and yet talk with those same men about the necessity of ventilating a stable, and they are ready to prove that they have kept horses all their lives, who did well, worked well, were always in fine health and spirits, and that a ventilator is only a fancy idea—one of the new-fangled notions of the present generation.

Our stables have been improved in architectural beauty, and in more permanent form of construction ; they are pleasing to the eye, tight, proof against the wind and weather, and with solid walls of brick and stone, all of which the poor horse would gladly exchange for the pure, fresh air, of which he is now deprived.

In providing for the necessities of a horse, it would be well to ask ourselves, how we should like to be placed in the same situation. If it is healthy for a man to live day and night in a close, damp cellar or underground apartment, then it is healthy for a horse. If it is healthy for a man to live on the lower floor, in an unventilated apartment, with a manure and root cellar beneath him, whose pestiferous miasmas are penetrating every crack, mingling with the foul air he breathes, and rising still higher, permeating the food he consumes, then it is healthy for a horse. But why argue against barn cellars and ill ventilated apartments ?—the proof is abundant to all who want it, and he that can not be convinced, must cease to wonder why his horses have diseases of the skin, the lungs, the eye, etc., or the glanders, the grease, the scratches, and other diseases that are directly traceable to the impure atmosphere, in which he compels them to stand and breathe.

We would, therefore, in the construction of a stable, endeavor to provide against these evils. Build root cellars and other cellars entirely distinct from the barn—at least not directly under the horse stalls ; let there be a free circulation of air under the floor, and particularly so throughout the stable apartments. Ventilate the horse stable through the roof, and entirely independent of the other portions of the barn ; let the connection between the horse stable and the hay mow be closed tight, except when hay is being delivered. Ventilate the carriage house through the hay mow and roof.

Let your horses' heads be towards the side or end of the barn, and provide the head of each stall with a fair sized window : a horse wants, under all circumstances, whether tired, sick, or well, plenty of light. When there is light and plenty of fresh air, it is a common practice to turn the stalls the other way, and keep the horse somewhat in the dark. A good horseman knows that a horse enjoys light and air as much as he does himself, and he will thrive better in the coldest Winter on the lee side of a hay stack, than he will in a badly ventilated barn, however comfortable it may be otherwise. It is stated that, if the gases exhaled from a horse's body were confined around him by a gas-tight bag, they would cause his death in twenty-four hours, allowing him at the same time to have his head out and to breathe pure air.

If you want satin-skinned horses, in fine health and spirits, ready at all times to work or to drive, a thorough system of ventilation will be one very important step towards it.

A manure shed should be built outside the stable, and sufficient only to afford protection from wind and rain, with a door connecting with the barn, and running to floor of stable, which should only be open when the stable is being cleaned. The exhalations of the manure heap are then not permitted to return to the stable—nor should any of the gases generated in the stable, be allowed to pass into the carriage room or hay mow.

As a matter of economy, it is just as cheap to build a stable calculated to give a horse the greatest amount of comfort, as to build it in any other way. Cellars are handy arrangements, and in the first cost it may be cheaper to put them under the barn, but a few years' experience will show the heaviest balance on the debit side.

New-York, April, 1860. GEO. E. WOODWARD.

Cranberry Culture....II.

PLANTING VINES.—The proper time for planting is in the Fall, in October and November ; or in the Spring, from the opening until the last of May. The plants may also be removed in August, with great care, but this time is not recommended. Whatever time is chosen, all cultivators agree that the plants should be removed immediately from their native bog, or the yards where they have grown, to the new plantation. The keeping of plants in damp warm cellars as some recommend, weakens their vitality. The purchaser should always stipulate for fresh plants.

If the cultivator have prepared his ground for flowing, the plants may as well be put out in the Fall. They will get well established, and be more likely to bear some fruit the first season. This is the more common practice upon Cape Cod, in the yards that are flowed. But if this advantage is not possessed, the Spring months should be chosen. The danger of Winter killing, which is very great upon all wet soils, will be avoided.

If upland is selected for a plantation, the Bell variety is best. This is said to grow in its native locality upon the edges of swamps, in clays, and wet gravels and sands. It is successfully grown by several cultivators in Massachusetts, upon soils dry enough for potatoes, and as their experience extends over the last six or eight years, and they have had tolerable success, there can be no doubt that with this variety, upland cultivation is practicable if not profitable.

Sod planting was the earliest method adopted for multiplying the plants, and is still followed. As this removes a portion of congenial soil with the roots firmly imbedded in it, it is the safest, and gives the new plantation the best start. The only objection to it is, the greater expense in stocking a new yard, and the trouble from the wild grasses taken up with the vines. These grasses are best kept under, by covering them with sand and gravel. After the vines get the start, they will smother the grass, and take care of themselves. Another method is to divide up the sod, and separate each vine from the grass, and plant them in hills of a half dozen or more. This involves more labor in the planting, but has the advantage of killing the grass at the outset.

Cutting planting is pursued by other cultivators, and is an economical mode of stocking a new yard. The vines are cut up into pieces five or six inches long, and the middle of each piece is inserted in the soil, and the two ends are left to grow. As the vine is very tenacious of life, it readily takes root and spreads. Sometimes the slips are cut shorter, and one end is planted with a dibble. Both these are popular methods, where there is a small stock of vines. The distance at which vines are planted, differs somewhat according to the circumstances of cultivators. The distance preferred on Cape Cod, is eighteen inches, but they are frequently planted three and four feet apart. As a rule, the nearer they are planted, the sooner they will form a complete mat over the ground, and yield a full crop.

Broadcast planting is adopted where the surface is completely cleared of bogs and roots, and the soil made of very fine tilth, and where the vines are plenty. They are run through a common hay cutter, making slips an inch or two long. These slips are either sown broadcast and harrowed in, or are planted in drills. These cuttings take root from the base of the leaves, and will soon present the appearance of young healthy vines.

Planting the seed.—This mode of propagation has been frequently tried, but not with very encouraging success. The fruit is taken after it is decayed, or mashed for the purpose, and is sown either in drills or broadcast, and barely covered with the soil. The young plants are feeble, and of slow growth compared with the cuttings, and are much more liable to be overcome with the grasses and weeds. Those who have had most experience in the business, do not recommend the sowing of the seed.

TREATMENT OF YOUNG VINES.—Though the cranberry does not require that amount of cultivation which many other varieties of fruit need, it is greatly benefited by tillage for the first two or three years. This is especially the case with the variety grown upon upland. Those who weed and hoe their vines, find that they grow much faster, and come sooner into bearing. The stirring of the surface of the soil, makes it more porous and accessible to the moisture of the atmosphere. It is true that plants often succeed when planted in the midst of swamp grasses, and overpower all rivals. But it is only after a long struggle. The office of the cultivator should be, to aid in this struggle, and to bring the plantation in the shortest time to the point where it will be profitable.

ENEMIES.—The cranberry, like most other fruits, has its enemies and drawbacks, and from the great fluctuation in the price, ranging from a dollar and a half a bushel, in years of plenty, to six dollars in years of scarcity, we may safely judge that it has its full share. The vine worm, one of the most fatal of these enemies, is about an eighth of an inch long, and carries on its work of destruction so furtively, that it is seldom seen until the attention is attracted by the dying vines. It begins its attacks at the base of the present years growth, and works upward, feeding upon the juices of the vine, and leaving a web behind it where it has finished its destruction. The vines have the appearance of the "fire blight." It comes soon after blossoming, and seems to visit the yard in patches, wholly destroying some spots and leaving others untouched.

The cranberry worm is very similar to the apple worm, and by some is thought to be identical. It attacks the fruit in the same way. Flooding is often resorted to, to prevent this, but with only partial success. No effectual remedy has as yet been discovered.

The rot also sometimes makes its appearance, but is much less troublesome than the insects. It is most likely to affect those spots which are lowest in the yard, where the water is stagnant. This is probably the cause of the disease, and the remedy is easy of application. The yards that are kept flowed in Winter, and surface drained in Summer, are most free from all these enemies.

COMPARATIVE PROFITS OF THE UPLAND AND SWAMP CULTURE.—While it is conceded that this fruit will grow upon upland, and that good crops can be obtained, especially with the Bell variety, it is only at the expense of much labor and nursing. The plant is not entirely at home there. Its native place is in the lowlands and swamps where water and peat are abundant. The great crops are raised upon these lands, and at very little expense for cultivation after the plants are established. It is only in cases where lowlands are not to be had, and in the way of garden cultivation for family use, that we can advise the planting of cranberries upon upland. We know that persons who have had tolerable success in the dry cultivation, and have plants to sell, differ from us in this opinion. Our convictions are the result of impartial observation, and will pass for what they are worth. As advised at present, we can only counsel our readers to make plantations on any large scale, upon the soils where the fruit grows naturally. On swamp lands, especially if they can be flowed in the Winter, say from November to April, they may reasonably expect success, and a generous reward for their labor. The demand for the fruit is already far beyond the supply, and is likely to keep ahead of it, for the next twenty years. If the price should fall a little, it would still be a good business. We have no particular solicitude for Fungus and his household, but for the sake of Merriweather the carpenter, and Jones the farmer, we should like to see cranberries more abundant in market.

How to stop the Apple Borer.

Some who have adopted the plan of shutting him out, have put on coal tar, or oil, and killed their trees. It is well known that this insect makes his attacks just at the surface of the ground, and if this part can be guarded in any way, the tree is preserved. The following plan is adopted by some fruit growers with great success. A piece of six-penny cotton cloth, about a foot in length, is wrapped around the body of the tree, extending a few inches above and below the surface of the ground, and fastened either by sowing or tying. The insect, finding this check to her operations, goes to unprotected trees to deposit her eggs. The cost is not over a cent for a tree for the cloth, and if this is too expensive, thick brown paper will answer as good a purpose for a single season; even newspapers will answer. This remedy is perfectly safe, and if effectual, it will remove one of the most formidable obstacles in the way of growing apples, quinces, and peaches. The latter part of May is a proper time to put on the wrappers. Some growers effectually protect both apple and peach trees, by banking them up with earth the last of May, and removing it in September. The insect is thus shut out from the tender bark around the collar of the tree, where it usually deposits its eggs.

Visit to the Kew Gardens....II.

(*Concluded from page* 113.)

"Please to show us some of them plants what lives on *h*air," says a raw-bred Englishman following in our train. Yes, yes, says the director, but wait awhile.

From this place, we passed on to the Orchid House where we saw many plants "that feed on *h*air," some of them attached to branches of wood, some in wire baskets, some in the husks of cocoanuts, and suspended from the rafters, living and flourishing, apparently on heat and moisture.

But now, we are tired out, and must sit down and complete our visit by studying the last Report of the Director. He says: "This Garden is especially intended to be the means of introducing new, rare, and useful plants, and dispersing them through our own and other countries, and to give an impulse to nurseries and persons trading in exotic plants. Collectors have been sent out into all parts of the world, to obtain and send home whatever would be of value here. The director also carries on an extensive correspondence with intelligent persons of every country. We have been aided in our work by the public and private services of individuals and companies, in conveying our collections to and from the East and West free of expense." The Report speaks of several new things lately received—such as the Tussack-grass from the Falkland Isles, already proved valuable in Scotland and Ireland; the Chinese grass, useful in making calico; the African Teak-tree, excellent for ship-building; the Huon-pine, from Van Dieman's island, proved to be a hardy and beautiful conifer; a hardy palm, from China; hardy rhododendrons from the Himalaya mountains, etc, etc.

The Report adds: "There is not a respectable nurseryman in the Kingdom, who has not profited by the riches of Kew, and is not willing to make us presents in return." Within four years, there were sent out—

1.	To botanical gardens on Continent.	1,132	living plants.
2.	" " in England.	1,155	"
3.	" Nurserymen and private gardens.	17,616	"
4.	Seeds collected and distributed.	4,819	packages.

The number of papers of seeds received from abroad we do not learn. As we have before seen, these Royal gardens are for the public enjoyment and profit. And to show how the public appreciate them, take the following, from the Record of Visitors.

In 1841,	the visitors	numbered	9,174.
In 1850,	"	"	179,627.
In 1854,	"	"	400,000.

The mass of these visitors come undoubtedly for health and recreation; but many for horticultural and botanical study; many for sketching trees and plants, to be worked up into landscapes, or designs for manufactured goods. The annual grant to this establishment from the government, is about $35,000, and it is well bestowed. Visitors are allowed free access, but they have to conform to the rules. For instance, smoking, eating, drinking, or the carrying of provisions for lunches, or packages of any kind inside the gates, is absolutely forbidden. Children without guardians are excluded. No flowers or plants may be touched without permission from the director.

But we have tarried in these famous Gardens a long while, and must now take a hasty leave, filled with admiration for "the powers that be" in England, in furnishing such a rare and vast collection of things useful and beautiful. Well did a discriminating visitor from this country observe: "No thoughtful individual can retire from this place without having had his mind enlarged and elevated. he will rejoice also that by the patronage of a wise government, these wonderful collections have been made, and by its discrimination there is appointed for their care the best man of the century."

We soberly consider a visit to Kew, of itself, worth a voyage across the Atlantic. Shall not our own country soon have a national garden, in fact, as well as in name? So may it be!

Two Curious Evergreens.

1. *The new Weeping Pine.* Horticulturists abroad are much interested in this singular tree. It belongs to the family of our native white pine (*Pinus Strobus*) but has a positively drooping habit. It originated in Europe about seven years ago, coming up accidentally among a lot of seedlings of the white pine. For cemeteries, it is regarded as peculiarly appropriate, and for certain positions in pleasure-grounds. We understand that it has been largely propagated during the past year, and will soon find its way here.

2. *The new Weeping Norway Spruce.* This is a distinct variety or sport of the favorite Norway conifer. Those who have seen it, describe it as being almost as pendulous as the old weeping willow. It originated in Liverpool, among a lot of seedlings, and was sent to Dorchester, Mass., in a package of some three thousand small trees. Its peculiarities did not appear until a year or two after it was planted here.

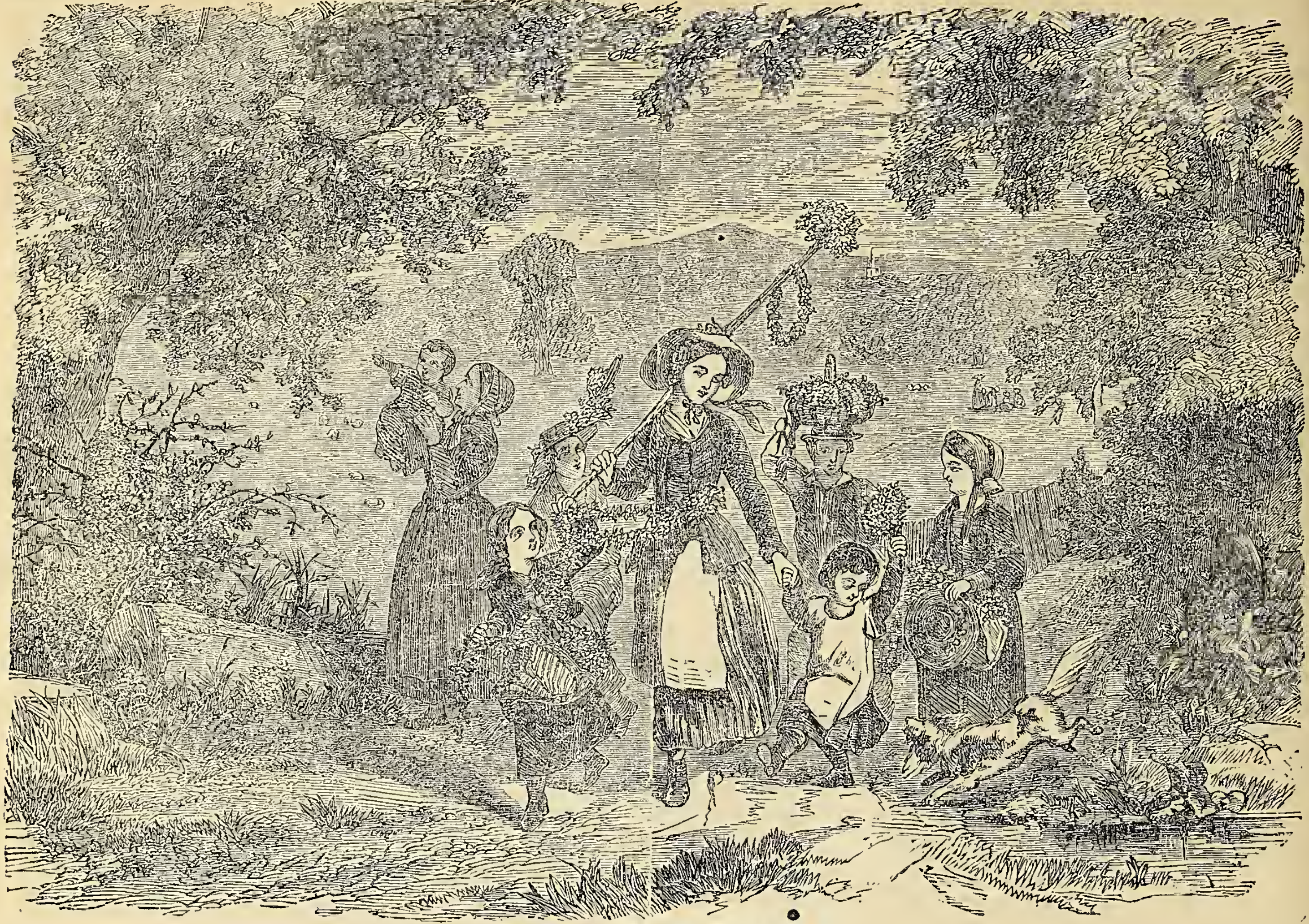
We have seen a photograph of the tree, and can assure our readers that it is a great curiosity. It is the property of Mr. Wales, near Dorchester, who, for some unexplained reason, has not yet allowed it to be propagated from. Perhaps, he is ambitious to be known as the sole proprietor of a very wonderful tree. We hope no accident may befall it before a duplicate is obtained.

More about that Oregon Tree.

D. D. Prettyman, writing from Multnoma Co., Oregon, speaks of this evergreen tree, or rather shrub, as follows. The "Wonderful tree of Oregon," alluded to in a former number of the *Agriculturist*, is a very pretty evergreen shrub, which bears a small red berry. It is here known as the "Oregon Balm," "Sweet Laurel," "Wax Leaf Canathis," and several other names. The leaf has a bright appearance, is sticky to the touch, and so sweet scented as to fill a large room with its odor when taken into it. I have transplanted a great many of the trees from their native localities, but have not succeeded in making any of them live, nor have I been able to raise them from seed.

Remarks.—We advise another trial with the seeds, putting them in boxes of earth as soon as ripe, and planting in Spring. Also take up a few small plants with a ball of earth about the roots, and set them in a soil made as nearly like the original as possible.

We have received from D. Whitworth, Washington Territory, a description of the tree, corresponding generally to the account given in our last number. Small trees sent by him are also on the way, and we may expect before long to have the claims of this stranger fairly tested.



MAY FLOWERS.

(*Engraved for the American Agriculturist.*)

“The flowery May, who from her green lap throws
The Yellow cowslip and the pale primrose.”—Milton.

Our picture is a little too leafy, perhaps, for this month, in some parts of the North, but for our latitude, and all south of us, it gives the true spirit of the season. The Spring has come with all its joyous associations. The snow squalls are past, the April showers are over, and one may safely venture out for the day, without overcoat and umbrella. You have here, in the foreground a family group beneath two majestic trees standing upon the banks of a stream. You see on the right a little patch of water with aquatic plants at the edge, and the dog who has just come out from a bath, as full of fun and frolic as the merriest biped in the company. The whole party are in motion, and the younger members have on their high heeled shoes. Every face wears the eager air of expectation, even the baby, who stretches up its little hand to the green boughs of the old oak, like older people, reaching after that which is too high for its grasp. They have gathered their spoils, cowslips from the brook, flowers from the hedges, evergreens from the woods, and are bound home or to the village green, where they will meet other family parties and join the frolic around the May pole. You miss the husband and father in the group, and this is one of the excellences of the artist, for he shows his power in a picture quite as much by what he suggests, as by what he portrays. The fact is, the old gentleman has turned boy, and you will find him down the stream a few rods, where it plunges over a rocky bed, casting his fly for trout. A brace of speckled beauties, a foot long or more, are already in his basket, and he confidently expects a dozen from the same rapids. It is of no use to speak to him now, for he has glorious sport, and nothing short of a drowning child would call him off until his basket is filled.

In the back ground you see other parties Maying, the peaceful kine lying in the meadows, the green woods, the spire of the village church, and the distant hill tops, a scene of rural beauty that will make every citizen long to pack his trunk, and start for the country. The reality, we suspect is quite as pleasant as the picture; and this month will find our readers, some of them in the far South enjoying green peas, tomatoes, and new potatoes, but the larger number, reveling in the vision of meadows in their freshest green, in blooming orchards and gardens, in the hum of bees and bird songs, wandering

“Through fields of floral silver and gold,
Catching the apple tree's breath and bloom.”

Native Shrubs and Plants.

The gardens and nurseries have already appropriated most of our native plants which are valuable for ornament; yet some may still be found in the woods which are worth transplanting. They will cost only the labor of digging up and resetting. We will mention a few:

The Leather Wood, called Wicopy, (*Dirca palustris.*) This shrub grows from three to six feet high. It is remarkable chiefly for the toughness of its bark. The Indians used it for cordage; millers and wood-cutters use it still for thongs. It has yellow flowers in April, before the leaves appear. The foliage is a fine, glossy green, wood white and brittle. It has the singular property (for a vegetable) of sloughing, i, e., of throwing off its dead wood. In transplanting, it is generally necessary to choose small specimens.

The Azaleas, or wild Honeysuckles. This genus includes many beautiful species of shrubs growing from three to eight feet in hight. The botanist Pursh, on first seeing the *Azalea Calendulacea* exclaimed: “It is the handsomest shrub in North America.” Of this species, there are three known varieties. *A. Nudiflora*, has flowers varying from nearly white to full red. Elliot says of this: “It is one of the most beautiful plants which adorn the forests of this country.” In transferring these honeysuckles from the swamps where they chiefly abound, to our gardens, it is important to choose those which have grown in an open spot, and to be sure to take up the whole mass of roots and soil together, and set them out unbroken, if you would be sure of success.

To our view, *A. viscosa* is not quite equal to *nudiflora*, but it blooms after that has faded, and its odor can not be excelled. Its flowers are white. *A. glauca* is another variety, but similar.

In regions where these “Swamp Pinks” abound, the flowers are gathered by the country-people, and afford the finest possible bouquets and mantel ornaments throughout the month of June In setting the plants in our gardens, we should give them a shady situation and a moist, peaty soil, so far as possible.

But we have not space to describe more of these rural beauties, and can only mention the names of a few others. Ledum latifolium; Shepherdia canadensis; Lonicera parviflora; Viburnum lentago; Cornus stricta, Florida and sanguinea; Taxus canadensis, Prinos glabra, and verticillata ; Spiræa salicifolia, and opulifolia ; Ceanothus Americanus ; Potentilla floribunda ; Menispermum Canadense; Clematis Virginiana, etc., etc. All of these and many more can be found in the latitude of Albany, and are worthy of a place in large grounds.

Planting Shrubbery.

Too little attention, it seems to us, is given to this feature of ornamental planting. Our rural improvers generally persist in setting out coarse timber trees, in rows like an orchard, all over their grounds, and finishing off their work by putting a lilac or a few rose-bushes around the doorway. Well, this is better than nothing. But an improvement can be made on this, as the following hints may show :

Let the forest trees—except on large places—be few in number, and confined mostly to the boundaries of one's premises. The trees near the house should be of smaller size, and such as have smooth trunks and branches. A few shrubs may be set near the dwelling. If the premises are small, like most village lots, single specimens of large shrubs may be set on the lawn and trained up as miniature trees. This will give the place an appearance of larger extent than though it had been set with forest trees. Shrubs may also be planted in groups and masses, arranging them according to their respective hights. They may also be used as screens to hide disagreeable objects, or to conceal one part of the grounds from the other. They appear very well, also, when used to encircle a flower garden ; the central beds being occupied with plants, and the boundaries set with shrubs, the lowest in front and the highest in the rear.

As belts to conceal from the house the outer fences of one's grounds, they are also useful. The pleasure walks may be led around in front of these belts, and so afford a pleasant view of them all through the season. If they are set here, instead of being crowded in front of the house, the lawn appears larger, and every way better.

A good assortment of shrubs will afford one a variety of flowers nearly all the Summer, and that with far less trouble than any other class of plants. We will here mention a few of the desirable sorts to plant : Azaleas, in variety ; Pyrus *japonica;* Robinia ; Spiræa ; Deutzia ; Euonymus ; Hibiscus ; Hydrangea ; Philadelphus ; Syringa ; Viburnum ; Weigelia, etc. A shrubbery is a permanent affair, one of the "institutions" of a country-place, and should therefore be made well at the outset, and afterwards taken care of. Those well proved and fast friends afford us in the long run, the greatest satisfaction.

Set out a few more Fruit Trees, etc.

Yes, set out a cherry tree by the gate near the road, and another at the end of the house to partially shade the sitting room from the hot sun. The cherry, when well trained, forms a regular, symmetrical tree, ornamental at least when covered with a profusion of snow white bloom, or bending beneath its load of dark red fruit. Set a pear tree in the nook by the shed, and one at each end of the carriage-house. They will injure nothing, and the rich soil will cause them to grow rapidly. Now put out a few peach trees along the garden border where the shade will scarcely injure the vegetables ; or a few trees may be set compactly 15 feet apart, and the space they would shade be used for raspberries and blackberries.

There is the lane, too, leading to the pasture, which might well have a row of apple or pear trees upon each side, which will injure the adjacent fields far less than the returns they should give. The road sides, also, can be set with apple trees yielding winter fruit. Such single rows of trees usually give better returns than the same number of trees in an orchard. Again, there is the south side of the barn, shed, and hovel, yes, and the tight fence upon the north side of the garden, which might be covered with grape vines and yield many bushels of fruit.

Now, reader, look about your buildings, around the yards, along the fences, etc., and see if there is not room for a few more trees. Then go to the nearest nurseryman, if he is an honest, careful grower, and select your trees, have them taken up with *all* the roots, take them home without exposure to the sun, and set at once in large broad holes, spreading out the roots and fibers in their natural position. If the soil is not rich, add a little *old* manure or ground bones at the time of setting, and hopefully await the result of your expenditures in time and money.

Puddling.

For nurserymen and others who have much planting to do, this is a practice of great importance. And this is the way : Dig a hole in a central part of your garden, two feet deep, and five feet in diameter, choosing a spot where the soil is quite stiff. If no such soil can be had, the sides and bottom of the hole must be plastered with a thick coating of clay. Now, fill the hole two thirds full with water, throw in a few shovels full of soil, stirring it up with a hoe as you proceed, until it is of the consistency of cream. Some persons recommend throwing in a shovel full or two of cow-dung. A tub or half-hogshead sunk in the soil answers the purpose of a puddling hole, where a permanent one is desired.

On digging up trees, shrubs, or any kind of plants, dip their roots in this cream and stir them about until every part is well covered. On taking them out, sprinkle some fine soil over them, and set them away in the shade. The trees may then be set out at leisure, or they may be transported a great distance before planting. Whether set out at once, or after several days, this puddling will be greatly to their advantage. A little care may be necessary in setting out, to see that the fibers of the roots are not matted together. They should all be spread out in their natural position.

Straighten the Fruit Trees.

We often see in fruit yards and orchards, trees inclining more or less. This deformity is sometimes the result of carelessness in setting, sometimes owing to prevailing winds in exposed positions. After a few years the inclination becomes permanent, to the great damage, not only of the beauty of the tree, but of its usefulness. For the erect habit, with a broad, well balanced head, is the normal position of a fruit tree, in which the aliment from the soil and the rays of the sun are most equally distributed among all the branches. In this position, too, it will sustain, without damage to the limbs, the largest burden of fruit. We have noticed that the apple borer is sure to make its attacks upon the under side of an inclined tree, where it is, in some measure, sheltered from the rain.

Though this may seem a small matter to the fruit grower, he will find it will pay well for his labor, to put these inclined trees into an erect position. If they have been thrown out of line by the prevailing winds, it will be well to throw them up a few inches into the wind, to make allowance for the future influence of the wind upon their growth. The best instrument to straighten them with, is a forked stick from the woods, ten or twelve feet long. Sharpen the lower end, so that it will stick firmly in the ground, and bring the crotch under one of the lower limbs, where it will not slip. A padding of straw or old cloth in the crotch, will prevent any injurious effects upon the bark of the tree. Loosen the soil on the windward side of the tree to prevent binding. A single season will generally suffice to make any tree permanently upright. The best time to do this is at the beginning of the growing season.

In the case of small trees, and where forked stakes are not convenient, the work may be done by a stout cord, fastened to a stiff stake, driven into the ground. In this case the tree has to be pulled into position, instead of being pushed. The cord, where it goes round the trunk, should have a padding of straw or litter. In case of large trees it is sometimes necessary to cut an obstinate root, that holds the tree in a leaning position. A little attention in a young orchard will make all the rows straight, and the trees longer lived and more fruitful. In setting trees at first it is well to incline them towards prevailing winds.

Grafting the Gooseberry upon the Missouri Currant.

To the Editor of the American Agriculturist :

I have succeeded in raising gooseberries even in unfavorable situations, by grafting them upon the Missouri or yellow flowering Currant, (*Ribes aureum,*) which is quite common as an ornamental shrub. I graft in early Spring, before the buds of the cions have swelled. Insert in the usual cleft manner, about two feet from the ground. The little "gooseberry trees" are quite ornamental, bear abundantly, and the fruit is far less liable to mildew than when grown near the ground. With moderate skill in grafting, most of the cions will grow. W. Dennis.

Grafting Grape Vines.

Many persons have old vines in their gardens which are worthless, or nearly so, and which they would like to replace with something better. Instead of digging them up and beginning again with very small plants of a new kind, it may be well to try and change their tops by grafting. This is the more desirable with such of the newer varieties as are of feeble growth. By insertion in the stock of a more rampant sort, they will be rendered more luxuriant and vigorous.

To do this well, requires more care than in grafting an ordinary fruit tree. The sap of the vine is so watery and so profuse in its flow, that it prevents the nice and speedy union of the cion and stock, but it is often done successfully.

The first thing, of course, is to secure the cions, which should have been cut before the Spring flow of sap, and buried in the cellar or other cool place. In preparing them for insertion, select strong, well-ripened wood. Some persons succeed in grafting, early in the Spring, at the usual time of orchard grafting, but this is not as favorable as a later period. Early in June, or when the leaves of the stock are well developed, and the first rush of sap is over, head down the vine to two or three inches below the surface of the soil ; make a clean cut with a fine-toothed saw, and pare off the edges of the cut smooth with a knife. Then, make a vertical slit down the stock with a chisel and insert one or two cions (according to the size of the stock,) in the usual cleft manner, taking care to bring the inside bark in contact with that of the stock, as in grafting trees. The cion should have two or three eyes, the lower one being just at the junction of the bark of the cion with that of the stock. Bind the stock well together with a string, as it is apt to spread open and let the cions fall out; then cover with wax. The string will rot and break before it does any harm to the growing vine. Draw the soil over the whole, leaving only one bud at the surface. This latter point is worthy of *special* attention: the whole question of success may hinge on this little thing. If the work is well done and a vital union effected, the cions will grow many feet the first season.

Freak of a Flower.

A subscriber writes: "Three years ago I purchased a Chrysanthemum. The first year after, it blossomed, and the flowers were very small and very pale blush; the second year the same, and last Fall, the flowers were as large and fine as a German aster, of a pretty mottled rose color. The plant was in a large pot, and was not re-potted nor the earth changed. Can you explain this?"

We can not fully. It is known that the character of the bloom is sometimes undetermined for two or three seasons; the shades of color often deepen as the plant increases in strength. Plants also occasionally *sport* in this way. The rose sometimes comes out in a new dress of bloom, quite different from its wonted habit, and other flowers are subject to the same freaks. It is an interesting matter for investigation by vegetable physiologists. A discovery of the cause might enable us to modify the color of flowers.

For the American Agriculturist.

What Flowers to Cultivate.

First, we shall suppose our garden adjoins the house on the sunny side, and is overlooked by the windows of the sitting room. It is sheltered from the north and east winds; is open to the south, and its surface uniform. We have exchanged our poor surface soil for good loam, and have made it deep by sub-soil plowing and trenching. The plan has been carefully studied, and is adapted to the surroundings—now what shall we put in it?

Much of its beauty will depend upon the edgings, for however graceful the arrangement, if the beds have ragged borders, the garden will be a continual eyesore. Dwarf box is a good material for the purpose, as it harmonizes with every thing around, subdues the glare of the gravely walks, can be arranged in any line, and is not injured by trimming. Edgings of grass are very common, [and the best if well attended to.—Ed.], but will cause a deal of trouble to keep in order.

The beds, though generally raised towards the center, we shall make quite level, because then those plants which occupy the center, and which require more nourishment—from their larger growth—will obtain their proper share during propitious showers, and the delicate seed will not be washed "down the hill." In making a selection of plants we shall have reference to securing a succession of bloom throughout the season. Probably, taken all in all, no one plant is more sought after, and better adapted for bedding than the Verbena. Reveling in all the tints of brilliancy which can be desired, it has sufficient hardiness, such a good, compact habit of growth, and many of them such a sun-defying rigidity of petal, that if the tribe were extinct tomorrow, we do not know which family of plants could fill the void. It will grow and bloom in almost any soil, and under almost any conditions, but, for rich and profuse blooming, should be planted about five feet apart, in soil somewhat sandy, which should be kept well open. The system of pegging down should be followed, and the decaying flowers pinched off. They will then soon cover the bed. For a collection of a dozen, we would select: *Robinson's Defiance*, *Brilliant de Vaise*, and *Giant of the Battles*, scarlets: *Anna Cora Mowatt* and *Odoratissima*, purples: *Mrs. Thorburn*, and *Lady Palmerston*, blues: *Mrs. Holford* and *Annie*, whites: *Uncle Tom*, maroon: *Imperatrice Elizabeth*, violet rose, white, striped, small, and delicate foliage, and *Madam Lamouniere*, lilac striped with white. To which might be added *Le Gondolier*, carmine; *Lord Raglan*, scarlet cherry; *Fanny Fern*, brick red; *Queen of Summer*, salmon blush; *Mrs. Mildmay*, rosy pink.

The Rose needs no eulogium, it gives its own, in fragrance and beauty, and will ever be a favorite. For a dozen we should select, *Giant of the Battles*, crimson; *Souvenir Malmaison*, blush; *Baronne Prevost*, bright rose; *Caroline de Sansal*, delicate flesh; *Jules Margottin*, carmine purple; *Madam Laffay*, rosy crimson; *Hermosa*, flesh; *Louis Odier*, clear rose; *Aimée Vibert*, white clustered; *Madam Rivers*, flesh; *La Reine*, lilac; *William Griffith*, rosy lilac. Tea roses are not adapted to bedding, as in this latitude they require to be housed in Winter. *Comte de Paris*, creamy white; *Safrano*, fawn; *Isabella Gray*, golden yellow; *La Pactole*, lemon yellow, are each worthy of a position in the flower border.

For the best twelve Pelargoniums (Geraniums) we should take six *Tom Thumbs*, scarlet; one each of *Aurora*, cherry; *Lady Turner*, finest white; *Brilliant*, scarlet, silver-edged leaf; *Consuelo*, rosy pink, white eye; *Duchess of Kent*, French white; and—*Tom Thumb* again.

Fuchsias—commonly called "Ladies Eardrop."—Of this queenly flower, it puzzles us to limit our choice to twelve. *Florence Nightingale*, scarlet tube, white corolla; *Duchess of Lancaster*, white reflexed sepals, violet corolla; *Queen Victoria*, carmine sepals, white corolla; *Venus de Medici*, white tube, violet blue corolla; *Wonderful*, scarlet reflexed sepals, violet corolla; *Prima Donna*, white sepals, violet corolla; *Macbeth*; *Mrs. Story*; *Charlemagne*; *Trentham*; *Prince Albert*; *Joan of Arc*.

Few hardy herbaceous plants exceed the Phloxes in brilliancy and variety. **Gæthe*, *Alice*, *Allaire*, *Bella*, *Marie Lamacq*, *Eugenie*, **Gracilis*, **Venus Cambaceres*, *Lawrence*, *Sax*, *Henri Lavergne*. Those marked * are the *Suffruticosa*, or dwarf variety, growing 2 feet high, and should be planted on the outside; the others are the *Decussata* variety, with strong erect stems, attaining the hight of 3 to 4 feet. These plants fill up a void which occurs in August and September, are perfectly hardy, and will grow in almost any soil.

We must not forget the beautiful class of plants called Veronica. Of easy culture, they flower all the Autumn, and within the precinct of Winter. The flowers, in erect spikes of white, blue and pink, are very attractive and pleasing. If better known they would be more appreciated. Plumbago *capensis*, with light blue flowers, good foliage, and blooms nearly all the season. Vinca or periwinkle, red and white, immense bloomer, rich glossy foliage. Cuphea, commonly called Ladies' cigar, very interesting and immense bloomer. Salvia, a family of great beauty; *S. patens*, blue, and *S. fulgens*, scarlet, are very desirable. Bouvardia, a fine plant with graceful, tubular flowers in clusters. Lobelia, *cardinalis fulgens* and *speciosa*, the first having an erect stem two to three feet high, a mass of scarlet bloom, the latter bright blue flowers. The Petunias are well known, and should be in every collection: they sport greatly when raised from seed sown the previous Fall. The Lantana has a pretty flower, rank foliage with a rough stem, but is a great bloomer; the finer they grow, the more profuse they flower. They form small bushes with pink, yellow, and orange heads. The Pinks and Heliotropes are popular favorites, and will, all of them, be highly prized for their fragrance and beauty. Before dismissing our subject we must not forget our young friend, the exquisite Dielytra Spectabilis, unquestionably the finest of all hardy herbaceous plants. W. H. Wilcox.

Westchester Co., N. Y.

Planning the Flower Garden.

There are two leading systems, according to which ornamental gardens may be arranged. One is, planting the beds indiscriminately with various plants, so selected and distributed that they will regularly succeed each other in their time of flowering, and be of different colors, hight, and general habit. The other is, setting each bed with only one kind of plants, and having the colors so arranged that they will produce the most striking contrasts, and the most harmonious whole. The first method is employed when the plants are a mixture of perennials, biennials, and annuals. The latter, when only annuals or "bedding plants" are used.

The first may be less fashionable, but it gives the greatest enjoyment to all classes and ages, and is, on the whole, the most desirable. In such a mixed garden as this, an assortment of flowering shrubs and vines may well be introduced. The herbaceous perennials should be so selected, as to afford flowers in succession throughout the Summer, and that of a variety of colors. This can easily be done by a little observation on the part of the planter. To do it, does not require a multitude and a great variety of plants; a few kinds well chosen and wisely distributed, will accomplish it.

Let a plan be fixed upon before beginning. The colors of flowers may be conveniently ranged under the four general classes of red, white, blue, and yellow. Suppose now, we are to plant a border which is wide enough to contain four rows of plants. We would place the smallest near the walk in front, the next in hight behind these, and so on, setting the largest and tallest in the rear. The back of the border would naturally be the place for shrubs, roses, honeysuckles, and other vines. We would set plants next each other which bloom at the same time. The arrangement of color should be a matter of considerable forethought. Having a list of his plants before him, the gardener should spend many evenings, if necessary, with paper and pencil, distributing his plants so as to produce the best effect of colors. Take these hints: Yellow harmonizes with blue; blue with white; red with white; and then orange with purple; crimson with blue; scarlet with white; pink with white, and so on. Lady gardeners need no instructions on this point: instinct teaches them.

What has now been said, supposes that the plants are to be viewed from only one side. When the walks are on each side of the bed, the taller plants must be set in the middle, and the smaller ranged around them.

Beds that are to be devoted to annuals or bedding plants, may very well be set with early flowering bulbs, which will be out of the way before the other plants come on.

How to Shape a Flower Bed.

Young and inexperienced gardeners often find it difficult to give the right proportions and shape to their plots. A plan is, or should be, first drawn on paper, where it may look very well, but when it is worked out on the ground it often happens that the intended circles are not circular, the ovals are flattened on one side, the hearts are more like gizzards, and the young tyro is discouraged by the bungling attempt, and wonders how those neat regular forms he saw in his neighbor's ornamental flower plot were made. He can easily mark out the squares, diamonds and other figures bounded by straight lines, but the curves, which look so much more beautiful are beyond his art. It is quite easy though, when the right implements are used, which are very simple. For striking out circles, provide a light strip, *d*, Fig. 1, say eight feet long, three inches wide, and an inch thick, and bore ¾ inch holes through it, six inches apart, the whole length. Provide two pins of hard wood, sharpened at one end, to fit the holes in the strips, and you are ready for work. Make the surface of the ground as even and free from stones and lumps as possible, set a pin where you wish the center to come, lay the strip over it, put the other pin through the hole that will give the right diameter to the circle, and sweep it around. Fig. 1 shows the whole very plainly.

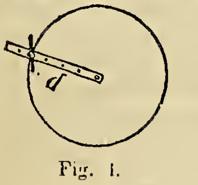


Fig. 1.

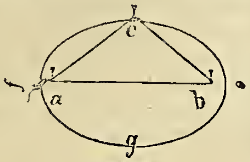
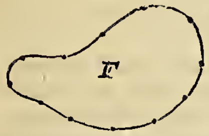
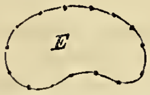


Fig. 2.





To mark out an oval, (fig. 2,) first mark the points of the greatest length and width as at *e*, *e*, *f*, *g*, drive a stake at *c*, and draw a line from *e*, to *f*. Take a rod or string half as long as this line, fasten one end at *c*, and carry the other around until it meets the line *e*, *f*, as at *a*, and drive a stake at that point. Carry the string around until it meets the line *e*, *f*, near the other end, as at *b*, and drive a stake there also. Then pass a cord around the stakes *a*, *b*, and *c*, draw it taut, and tie its two ends together. Pull up the stake *c*, let its lower end rest on the ground and against the inside of the cord, and carry it thus around the plot, and it will mark out the oval through the points *e*, *e*, *f*, *g*.

If it is desired to lay off curved figures, as shown at *F*, *E*, first set small stakes say eighteen inches apart in a direction to form the outline, and then having but a little distance to mark from stake to stake, it will be easy to get it right.

New Annual Flowers.

The amateur in search of superior novelties for the present Summer, should not fail to get the following if they can be had. Clarkia pulchella *integripetala*, the hybrid blue Sweet Pea; Callirrhoe *digitata*, and Callirrhoe *pedata* ; Œnothera *hirsutissima*, from California; Dianthus chinensis *laciniatus*, which grows two feet high, with flowers about four inches in diameter, of various colors, and blooms till frost; Dianthus chinensis *Heddewigii*, one foot high, flowers three inches in diameter, and of various colors; Anagallis grandiflora, *var. Eugenie*, light blue, shading from the center to a pure white border; Anagallis grandiflora, *var. Napoleon Third*, rich maroon crimson; Nemophilla discoidalis *marginata*, like the old discoidalis, but with a white border. The Dianthus *Heddewigii* is greatly lauded by foreign florists. They say the plant is quite large, the leaves broad and bluish green, thirty or forty blooms open all the while and sporting into various colors. Each flower measures about three inches in diameter.

Of Callirrhoe *pedata* ; Prof. Gray says: (See Transactions Mass. Hor. Soc. p. 30.) "This is a biennial from Texas. The young plants require the protection of a frame through the first Winter, and planted in Spring, they produce all Summer long a succession of rich, *mauve*-crimson blossoms. In a Conservatory they often attain the hight of seven or eight feet. It is the handsomest of malvaceous plants."

To these we may add Clarkia *pulcherrima* described as far excelling C. *pulchella*, the flowers being twice as large, more profuse, and of pure brilliant carmine; Schizanthus *Grandiflorus oculatus*, brilliant purple, with dense dark blotch, larger than other varieties; and Heliophila *Cœrulea stricta*, a very pretty variety, of fine rich blue color. The colored prints of the last three show them to be of great beauty, and to deserve the high praise they have received in Europe. Small packages of seeds of these were obtained in England, and placed on our list for distribution as an extra premium. See page 128, April No.

The Farfugium Grande.

This plant is destined to make a great sensation the present year: we wish, therefore, to say a few words about it.

It belongs to the Coltsfoot class. The leaves are large, sometimes more than two feet in circumference, of a bright emerald green, curiously spotted with patches of clear yellow. They have footstalks from twelve to fifteen inches long, and lapping over each other in luxuriant growth form tufts of foliage truly magnificent. The flowers are not particularly striking. If not injured by late frosts, it may be taken into the house, and will there retain its foliage all the year. It is particularly valuable as an ornament for the greenhouse or parlor, enduring furnace-heat and dust as well as a Begonia or Oleander.

Not least important, it is *almost* hardy enough to endure the frosts of any climate. It came from the North of China, being introduced by Mr. Fortune, who has done so much to send us the plants and trees and shrubs of that "celestial" land. As it is hardy in England, it will undoubtedly be so in our Southern and Middle States. North of this city, it will probably require wintering in a pit, or green-house, or cellar. But it will amply pay for this trifling care by its splendid show throughout the Summer. Would it not make a striking object in a vase on the lawn, or in an ornamental pot or box set on a terrace or veranda? If a circular bed six feet in diameter were cut out on the grass-plot and set with four or five plants, it would make a grand show.

The gardeners tell us that its cultivation is simple. Divide the roots, and set them in a mixture of leaf-dirt and good garden soil. It likes considerable moisture during active growth, and the gold tints of the leaves are more distinct if it is favored with a little shade at mid-day. Hear what the English Cottage Gardener says: "For the next few years, this will be the most popular plant among the variegated-leaved plants, because it is everybody's plant; a plant for the Queen's drawing-room and for the rooms of all her Majesty's subjects; also for their rock-gardens, wilderness-dingles, and all places not too much exposed to the sun."

New Petunias.

Countess of Ellesmere is one of the best; compact, bright rose-color, with white throat. *Inimitable* is one of the most striking sorts; a white ground color, blotched irregularly with bluish purple. *Mrs. Buchanan* ; crimson, beautifully striped with pure white. *Hermione;* large, white ground, clouded with delicate flecks of blue. *Little Nell;* a charming thing, light ground, covered with a crimson net work. *Attraction* ; purple ground, finely striped, good shape. *Exquisite* is perhaps the best white. *Antigone* and *Gen'l. Havelock* the best double whites.

Roses from Cuttings.

A correspondent who has some twenty different varieties of fine roses, wishes to learn how to propagate young plants from cuttings.

This is not difficult. Prepare a frame six or eight inches deep, on the north side of a fence or wall, and half fill it with good garden soil mixed with sand and leaf-mold. On top of this put three inches of clean sand. The sand is used to prevent the rotting of the cuttings before they begin to grow, and to facilitate the emission of roots from the lower end. The cuttings should be made of newly ripened wood, five or six inches long, and inserted two and a half inches in the sand, so that as soon as the roots have grown a little, they will find their way into the soil underneath, and so obtain the nourishment they require. In June, just after the first blooming season, is considered the best time.

If each cutting has a "heel" of old wood, it will be quite likely to strike or grow. Strip off all but one or two of the upper leaves. Stick in the cuttings to the depth mentioned, give a good watering, and lay on a common hot-bed sash. Take off the sash every warm night. Every day or two, give the plants a sprinkling, just at evening. After they have made a good growth, they may be transplanted separately into pots; or they may be wintered in the frame, if well protected.

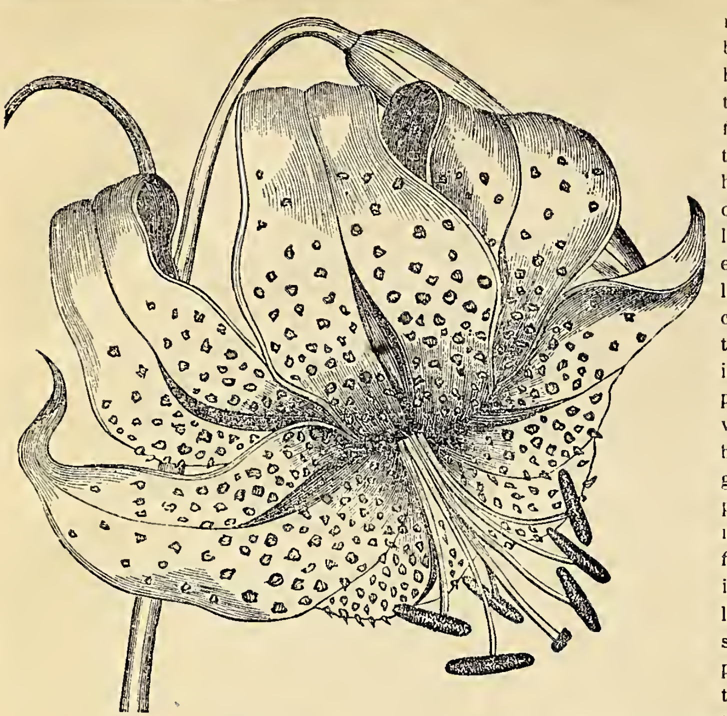
New variety of Moneywort.

In a former volume, we gave some account of the common Moneywort, (*Lysimachia numularia*) a trailing plant, similar to the periwinkle, and having yellow flowers. A new variety has just been brought into notice, called *Lysimachia nutans*. It grows erect, and has spikes of crimson flowers, three inches long. Its entire hardiness for this climate has not yet been determined.

Raise your own Seeds.

To be sure, a single paper of seeds costs but little, but to fill a good garden plot with the whole round of vegetables each year, makes up quite an item: "'Tis too much trouble," says neighbor Easy, "to be fussing with these little notions." Grant that it is some "trouble" to set out a dozen or fifteen varieties and take care of the seeds—"there can be no gains without pains." Try this: have an understanding with two or three neighbors, and each raise 4 or 5 kinds and exchange; or yourself raise a few kinds—say this year *in abundance*, and a few kinds next, and so on; for this will be easier than to care for all the varieties at once. By extending this arrangement, each family in a district might be easily supplied.

YANKEE.



Japan Lilies.

These beautiful flowers, brought from Japan some twenty years ago, were, until within a few years, considered too tender for out-door culture, and the books and horticultural magazines gave minute directions for their treatment in pots. They are, however, as hardy as many of the common garden flowers, surviving the alternate freezings and thawings of our most rigorous and changeable Winters. A flower of such beauty should be more generally cultivated. Bulbs can be obtained of seedsmen, florists, and nurserymen, but as they are still rather scarce, they command from 40c. to $1, and even $2 each, according to rareness. A few bulbs can easily be increased in a single season by the natural offsets, or still faster by separating the scales and potting them, or placing them in a moderate hotbed with plenty of sand. Whole bulbs may be planted either in Fall or Spring—better in the Fall, usually. They may be put in common garden soil, but thrive better where the ground is dug deeply, and has a coating of manure, and plenty of well decomposed muck worked into it. If inclined to clay, an addition of sand with the muck will be beneficial. Set the bulbs with the crowns three inches below the surface, and cultivate like other lilies. They grow from four to six feet high, and have a nodding bloom, as shown in the engraving. There are several varieties of the Japan lily, conspicuous among which is the *Speciosum*, figured herewith. This has a pink and white ground, its reflexed petals being beautifully spotted with red and crimson. Planted in beds one foot apart each way, they produce a fine effect, besides emitting an agreeable fragrance. Upon the approach of Winter, it is well to cover with a few inches of coarse manure, which serves as a partial protection, and enriches the soil. They should not be moved often, differing materially from the tulip in this respect. Every fifth year is quite often enough, and it is better to leave them even longer.

Time for Planting the Garden.

That "haste makes waste," is true in gardening. One swallow does not make a Summer, nor will one, two, or three warm days early in April make it safe for the gardener to commence operations, as inexperienced beginners are usually in haste to do. Egg plants, tomatoes, and cabbages from the hot-bed, and tender leaved cucumbers, squashes, beans, etc., can illy withstand long continued cold rains, even if they escape the late cutting frosts. Excepting the hardy vegetables, as spinach, radishes, lettuce, onions, peas, winter cherry, etc., which, with raspberries, blackberries, currants, gooseberries, grapes, asparagus, and rhubarb may be planted from the first to the tenth of April, in this latitude, there is little gained by putting in seeds or setting out plants before the fifteenth, and often not till the twentieth of the month. Let the ground be sufficiently warm to start the seeds quickly, and push the young plant forward rapidly, after it is up. A memorandum of some of our own planting may be of service to the novice, beginning with those kinds not enumerated above.

April 12, sowed seed for early turnips, kohl rabi, a few beets, and planted early potatoes; 15th, sowed a few carrots, planted a little early corn, some cucumbers, nasturtiums, and salsafy; 20th, set out early cabbages, cauliflowers, lettuce, and tomatoes from hot-bed; also sowed parsneps, and planted early beans; 25th, planted late beans, more corn, potatoes, late squashes, remainder of the carrots, water and muskmelons. May 2d, set out egg plants, and more tomatoes; sowed peas, spinach, radishes, and lettuce for succession; 10th, sowed rest of the beets, and more peas. June 1st, planted more corn, and sowed peas again; also set out late cabbage and cauliflower plants. July 5th, sowed turnips for general crop on ground cleared from early peas, radishes, lettuce, spinach, and potatoes soon to be dug.

The Lima Bean.

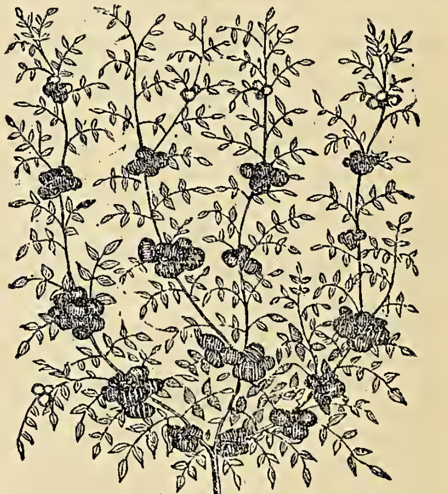
This is probably the best leguminous plant grown in our gardens. It has a rich, sweet, and buttery flavor, which can be compared to nothing but itself. In the neighborhood of each of our large cities several hundred acres are annually devoted to this plant, so great a favorite is it with every body, in season and out of season.

And it is easily raised. As the Summer at the North is a little short for its full enjoyment, it is well to hurry it forward in Spring by a shovel or two of manure in each hill, and raising the hill three inches above the surrounding surface, will help in giving a start. Let the soil all around be mellow and warm, and the situation be well open to the sun. Plant five or six beans to a hill, and if all start, thin them out afterwards to three or four plants. Set the poles in the center of the hill, at the time of planting. Our own practice is to plant in drills on a bed about two feet wide by the side of a cheap trellis or frame, described in Vol. XVIII, page 166, (June No.), and as the vines grow, they are trained up on twine leaders. This gives them more light and air, than when they wind together upon poles, gives stronger growth, and hastens their maturity. When the vines have grown seven or eight feet high, they should be pinched off, so as to cause an earlier and fuller development of the pods below. This last is doctrine for the north—not so important at the south.

When the first frost comes, gather the pods, and you may have Lima beans at Christmas, as fresh, plump, and delicious, as those picked from the vines in August. How? Pick them before the frost has injured them, spread them on the garret floor, or any airy loft, turning them over once or twice while drying. Reserve the largest and ripest for seed. The green beans will need soaking only twelve hours before cooking, the riper ones will need twenty-four. These beans are particularly fine when used in Winter with sweet corn; we have luxuriated upon them recently, and write from the inspiration. They may also be kept, when well cooked, in fruit bottles or cans, by corking and sealing them airtight, by which process their peculiar flavor is preserved. With such delicacies within reach, there is no need of being limited to the few articles of diet in common use on the farmer's table.

Training Tomatoes.

Tomato plants are too frequently left to take care of themselves. Some gardeners even maintain that it is better to let them lie upon the ground to receive the benefit of the heat absorbed by the soil during the day. There is some advantage in this, but it is more than counterbalanced by their liability to rot, and to be injured by insects and absence of sunshine. Many who attempt to train their tomatoes, do it imperfectly. A single stake is driven in the ground, and the whole plant is drawn together with a string, and tied to the stake, leaving but a small portion exposed to sun and air. A better method, which we have seen practiced, is to "stick" them like peas, using two or three strong bushes for each plant. In the above cut the plant is spread out upon a frame or low trellis, exposing both fruit and foliage to the full benefit of the sun, as is shown in the illustration above. Of course the frame should be upon the north side, and it is better to cut away some of the branches, and head back those which are too rampant. Trained and pinched back in this way, ripe fruit can be had, from hot-house plants, during the latter part of July. Another method, though not equal to the above, is to drive stakes about the patch, and fasten poles upon them, making a horizontal frame about two feet from the ground. This keeps them up, but they do not receive the exposure needed, so well as when trained to the upright frame in the manner above described.



How to Raise Melons.

Many persons at the North, especially those who have a stiff and cold soil to deal with, complain that they can not raise melons. They have not the time or the means to grow them in hot-beds, and in the open air their plants make only a feeble growth, and produce a few half-ripened, puny melons just at the setting in of frost.

Melons at Christmas are hardly to be desired, and we think they can be had before that time by several months. Our way is this : Early in May select a warm spot in the garden, dig holes four feet wide and eighteen inches deep, throwing aside the poorest of the bottom soil, bring in coarse sand and some leaf-mold from the woods, and a little old manure ; mix all thoroughly together, adding about one fourth of good garden soil. Each hole, when finished, is raised from four to six inches above the surrounding surface. The seeds being planted, (and we take pains to secure good seed.) cover the hills with rough boxes, six inches high, and three feet square, and place over each a frame of glass or millinet. This breaks off the cold wind, and keeps out the little black bug, and him with the striped jacket. Sometimes, we cover the ground around each hill with an inch or two of pulverized charcoal, and it absorbs the heat of the sun's rays, and makes the plants grow rapidly. The frames should be taken off during the middle of hot days. When the plants have filled the boxes, they (the boxes) should be stored away under cover, and so can be made to last for several years. We have recently seen vine protectors, made by tacking millinet upon four sharpened sticks of, say two feet in length, fastened together at the top by strips of leather, and spread at the bottom enough to cover the hills. These are very convenient, and can be folded and packed in a small compass to be laid away when not in use.

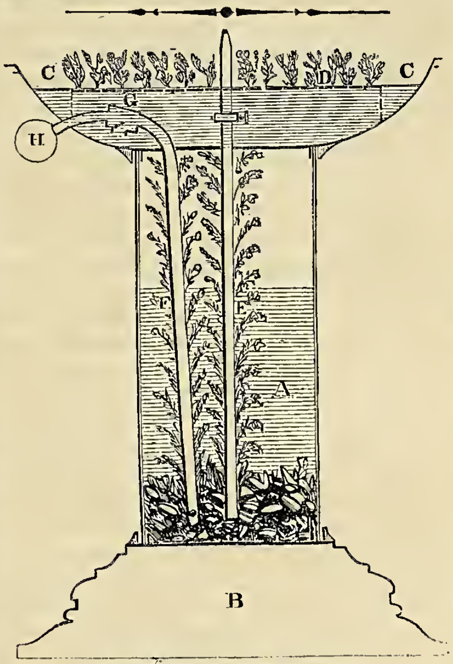
The fruiting of the vines may be hastened considerably by nipping off the leading branches. Muskmelons produce their fruit at the axils of the first leaves of the lateral shoots. If the leading branches are allowed to run, these laterals will not push out, until the branches have grown to a considerable length. Pinch off the leaders, then, as soon as they have made three or four leaves : this will give at least a week's gain of time. And when the bearing shoots have made three or four leaves beyond the fruit, nip them off likewise.

A simpler mode than the foregoing, and one that sometimes succeeds, is to prepare the hills as already mentioned, plant the seeds, and lay down four bricks flatwise around the hill, and place over the space between a large pane of window glass. When the plants have reached the glass roof, set the bricks on edge, and lay on the glass again. By the time the plants have outgrown their quarters, they will be strong enough to defy the bugs and the open air.

Let us not omit to say that manure should be placed not only in the hill, but should be spaded into the surface between the hills, to feed the plants when the roots have extended beyond.

As to varieties : the Christiana is a fine early muskmelon ; the Green Citron, Skillman's Netted, Fine Nutmeg, and Rock melon are good late sorts. Among watermelons the Black Spanish and Mountain Sweet are superior sorts.

SAVING A WASTE CORNER.—A friend, who makes the most of everything, once showed us a novel way of turning a waste place to account. In one corner of his small enclosure was an unsightly pile of stones and rubbish, which he could not at the time remove. He leveled it so as to support a tub made from a barrel sawed in halves. This was neatly painted, filled with good soil, and cucumbers planted in it. When the vines grew to need support, a horizontal frame of laths was carried out from the edges of the tub, upon which the runners soon extended and fruited quite full. It looked very pretty, the cucumbers were kept up from the ground, and he said were of better flavor, and thus the corner became a profit instead of a nuisance.



A Self-Acting Fountain.

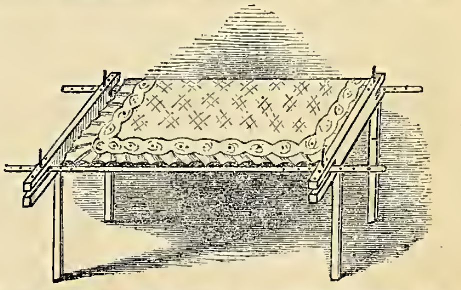
The fountain here represented, which is a modification of a foreign design, is intended for a hall or conservatory, for which it appears to be very well fitted, being neat, portable, and not necessarily very expensive. As the name, " Self-acting " indicates, it does not require a living stream to feed it, and may therefore be used where such a supply is not obtainable. It has, however, the disadvantage of operating but a short time without attention. The construction is easily understood by reference to the figure. *A*, is a glass or metal cylinder, say two feet long and nine or ten inches in diameter, made strong enough to bear a moderate pressure. *B*. A zinc stand, with a rabbet at the top-edge to receive the bottom of the glass cylinder. *C*. A bowl made of zinc to hold water, and rabheted to receive the top of a glass cylinder, both top and bottom to be fixed firm to the glass cylinder with cement, and made both air and water tight. *D*. A loose zinc cover to hide brass top and valve, is made to slip over pipe *E*, and is pierced with holes, so that ornamental or fresh flowers may be placed therein. *E*. A pipe one quarter of an inch in bore, with brass cock, the top end of pipe to be fined down to a hole about the size of a needle's point, and to stand up about three inches above the top edge of *C*, and to be continued through the bottom of *C*, into the cylinder *A*, to within about two inches of the bottom *B*. It must be made tight in the solder to the top *C*, where it goes through it. *F*. Another pipe similar in size to *E*, and carried down in like manner into cylinder *A*. This pipe, however, must be carried through the side and bottom of the bowl *C* ; and between the place where the pipe enters the bottom and side of *C*, there must be placed a box, *G*, having a valve or clack opening inwards, so as to admit water, and then close when in use. *H*. An India rubber ball, with a neck to it, so as to fasten it to pipe *F*. This ball should be three or four inches in diameter.

To make the fountain play : pour a quantity of water in bowl *C*, and a portion will run down pipe *F*, through valve *G* ; when it stops, commence working the ball, *H*, in the hand, by opening and shutting it; this forms a pump, and forces the water from bowl *C* into cylinder *A*. Let the top of the pipe *E* be shut in forcing the water into cylinder *A* ; it compresses the air in the upper part, and that forms the spring. When the ball *H* has been worked for a few seconds, open the top of pipe *E*, and you have a small but lively jet of water playing for about half an hour.

The pipes in the cylinder *A* may be ornamented by fastening flowers or imitation plants round them ; and the bottom may be made rocky before putting the apparatus together.

Quilts and Quilting Frames.

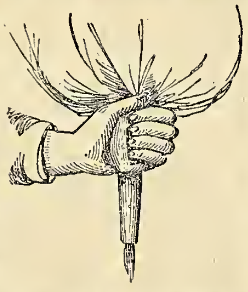
It *looks* like a waste of time to buy calico, cut it up into inch pieces, and spend the leisure evenings of a whole Winter in sewing it together again in fantastic shapes, to make a bed-quilt, which, when finished, often looks like a failure to harmonize the chaos of a rag-bag. There may be economy in using remnants of cloth and partly worn garments in this way, and much taste may be displayed in the arrangement, but quilting merely " to make a spread " in the manner first described, is not profitable industry. Making quilts of pieces otherwise wasted, is a good initiation into the mysteries of needle-work for the younger girls, and quilts not too thickly wadded, make very good bed-clothing Quilting parties, too, are very popular social gatherings, promotive of pleasant feeling among neighbors, and too fully Americanized to be easily abolished. Quilting frames, however, are generally voted a nuisance by the " men folks." As usually made, with four ten-feet strips, and set upon the backs of chairs, they monopolize the room occupied for the time, are easily overturned, and occasion much inconvenience.



As many have by this time finished their patchwork for the season, we will try and aid them in completing the quilting by giving a plan of a very simple frame, occupying much less room than the ordinary kind. It was furnished for the *Agriculturist* by Isaac Evans, Crawford Co., Ill. The " men folks " will no doubt be glad to make a set, both to please their better halves, and to abate the nuisance they complain of. The end pieces are made only about four feet long with an open mortise let into each end to receive the rounded extremity of the side pieces. Holes are bored through at right angles with the mortises, to receive pins, with which to keep the "stretchers" or long side pieces in place, when the frame is in use. The long pieces may be of plank strips, left square, or better, worked eight-sided the whole length, with the ends rounded to turn easily in the mortises Holes are let through to receive the pins that pass through the mortises When wanted for use, the quilt is stitched to cloth strips fastened on the side pieces in the usual manner. One side is rolled up, the ends of the "stretchers" are placed in the mortises, and fastened with pins, as shown in the cut, and all is ready. It is better to have legs attached to the end pieces, on which the frame may stand, than to rest it on the backs of chairs. When one width is finished, and the quilt is ready to roll, the pins are removed, the quilted part brought on to the front roller by turning the side piece, and the pins inserted again.

Apparatus for Ornamenting Cakes, etc.

The beautiful designs with which bakers and confectioners ornament their work, require a practical knowledge of the art which no mere description can give. They use only a few simple instruments, but practice and dexterity enable them, with these, to produce very pleasing results. One of their implements in most common use, recommended by Mr. Crozer, an experienced baker, a description of which is here given, will be found very convenient for household use in making scrolls, wheels, borders of beaded work around frosted cake, and fancy trimming of this kind so much in demand for wedding occasions, parties, etc. It is simply a bag of stout cotton cloth, of any convenient size, in the form of a cone or sugar loaf, with an opening of about ¾ of an inch at the bottom. A tin tube about 2 inches long, an inch in diameter at one end, tapering to ⅜ of an inch at the other, is slipped partly through the lower end of the bag as shown in the picture. The bag is sometimes made of oiled silk, to better retain the semi-fluid mixture, and tubes of different diameters may be employed to suit various kinds of pastry work. To use it, introduce the frosting mixture or other compound into the bag, gather the top together, gently squeeze it with one hand, and as the roll comes out below, move it about to form the pattern desired. This will be found more convenient than the syringe, recommended in some cook books. The apparatus may also be used for shaping the cakes called Lady-fingers, Macaroons, Jumble kisses, etc. A little practice will enable the housekeeper to present her cakes ornamented as neatly as if done by a professional baker.



Cutting Glass without a Diamond.

A subscriber to the *Agriculturist*, A. Mead, N. Y., writes that glass may be readily cut with a file, by keeping it wet with spirits of turpentine, which gives it a "bite." We have seen the following process recommended for dividing circular vessels as bottles, jars, etc. Fill the vessel with any kind of oil up to the point where the division is to be made. Heat an iron rod to redness, and slowly introduce it into the top of the oil; the glass will crack in an exact circle around the surface of the liquid. The heat imparted to the oil, causes the inner side of the jar to expand rapidly, and thus makes a break. *

[Remarks.—The last recommendation is of doubtful utility. We have often cut off glass bottles readily by first filing a small notch for a starting point, and then applying a hot iron rod, or poker, moving it slowly back and forth along the line where we wished the crack. By keeping the iron ahead of the break, you can *lead* it in any direction desired, so as to cut off the bottle square, or at any angle. When at work in the laboratory, we often made extempore tumblers for holding various substances, by thus cutting off the upper part of bottles, of which the necks had been broken. We have also made gas transferrers, etc., by cutting off the bottom of cracked bottles, leaving the neck and main body whole, with the bottom open. After a little practice any one can, with a hot iron, *lead* a crack in a bottle, tumbler, or along flat glass, in any desired direction. The sharp edges can be smoothed or rounded with a fine file, or by grinding. We have often cut a pane of glass nearly true across, by filing a slight notch in the edge, laying on a cold iron, or even a strip of wood for a rule, and then passing a hot iron back and forward, along the place where the fracture is desired.—Ed.

Familiar Talks by the Doctor......V.

Mr. Editor.—Another thing that injures the health of our farming population is the entire neglect of all that pertains to digestion. True, farmers are no more careless in this respect than many other classes of people; but for all that, they injure themselves in this way, and it is sorry comfort that mechanics do the same thing. The process of digestion is, after all, an important one. Our food contains, or ought to contain, those elements which are best adapted to supply the waste of our bodies, for our bodies are constantly wasting. Every movement made, every breath drawn, every idea which enters our minds causes more or less of waste. The complicated machinery of our bodies is constantly wearing out, and as constantly requires to be repaired. From our food alone, can supplies for these wastes be drawn. But something more is necessary to fit our food to nourish (that is to repair the waste of) our bodies, than to put it into our stomachs. Swallowing one's food is necessary, and to be commended, but some other processes are necessary both before and after swallowing, the custom of so many of the universal Yankee nation to the contrary notwithstanding. It is necessary before swallowing, to chew the food thoroughly. The thing that is necessary after swallowing, is digestion, by which the food is dissolved and its nourishing elements fitted to be taken into the circulation. If we had gizzards, like fowls, it would do for us to swallow our food whole as they do their corn, but not having gizzards it is necessary to grind our food in other ways. It is *probable*, to say the least, that this is the design of the teeth. True, to chew a piece of beef requires some time, but one by practice acquires the habit of biting it once or twice, rolling it up on his tongue, and swallowing it as he would a big pill. But it will not be dissolved so quickly if he gulps it down, as if he had chewed it, and the waste made in his system by his labors, will be *sooner* repaired, if he stops to chew his food, than if he takes it whole. As a matter of *economy of time*, it is better to stop to chew one's food. The process of dissolving also requires time, and a certain amount of quiet. I do not say absolute rest, but of quiet. A certain amount of blood must be furnished to the stomach that it may be able to supply the fluid (gastric juice) which is to dissolve the food. If, by at once engaging in violent exercise, or in any other way, the blood is prevented from going to the stomach, that juice can not be digested. It will act precisely as it would if, instead of being swallowed, it had been put into a bottle, and kept as warm as the interior of our bodies, that is, it will sour, and not only distress us, but be coming up into the mouth—a most annoying thing. Some people's stomachs will bear this for a time, but sooner or later, they give way, though originally as strong as an ostrich's stomach, and you know it is said they can digest nails, (which I do not believe). I shall not take up your valuable pages by stopping to illustrate or to prove these statements. But depend on it, they are true. To state my doctrine briefly, it is this. If you wish to avoid dyspepsia: 1st, take simple food. 2nd, chew it thoroughly. 3d, eat leisurely. 4th, do not go to work too soon after eating. 5th, do not drink too much with your food. Even water may be taken to excess, and it then dilutes the gastric juice till it has no power to dissolve the solids.

It was by neglect of all these rules that Mr. Crustyman, to whom I alluded in my first talk, got his dyspepsia, and that is what makes him so snappish. He has often boasted that he does not waste his time in eating. Well he is a little richer perhaps, but he has to spend some of his extra money in paying my bills. P. H. E.

For the American Agriculturist.

Home-made Bread.

Good yeast is the first thing necessary. To procure it, take one quart of flour, and mix with water enough to make thin, smooth paste, free from lumps. Stir this over the fire until scalded, and when cooled to about blood heat, add one good, fresh yeast cake, previously dissolved in half a pint of pretty strong hop tea. Put this into a jar, and set it in a moderately warm place, until it begins to ferment. Then set it away in a cool place for use. This yeast will remain good, as long as it is kept where it is too cool to ferment.

For two loaves of bread, mix half a pint of this yeast with two boiled potatoes, mashed fine. Then, having mixed three pints of flour with one tablespoonful of lard and half a pint of warm water, add this mixture of yeast and potatoes. Mix and knead well, and set in a warm place to rise, (which may require thirty or forty minutes;) when light enough cut into two equal parts, mould into shape. put into pans, let stand a few minutes to rise a little, and bake in a quick oven.

Never use saleratus or soda in any kind of bread, but instead of these, when it is necessary to correct acidity from too much fermentation, use *lime water*, which is easily made by putting a lump of fresh lime (about one pound) into a jar with one gallon water, and when this has settled clear, (which may require two or three days.) pour off the clear liquid into bottles, and cork tight to preserve from spoiling. This costs nothing but the trouble of making it, and will keep forever, if well corked. R.

Irvington, N. J.

Hints on Cooking, etc.

A CHAPTER ON KISSES.

These are luxuries over which the lips are smacked with satisfaction by lovers of sweet things, and if temperately enjoyed at proper times are innocent as we have proved by trial—bakers' kisses of course—for we take it our readers need little instruction about the other sort. The kind now referred to, are usually in the form of egg-shaped, snowy white lumps with a sweet, crisp, and brittle shell, and soft creamy inside, and are named kisses, perhaps, from their melting so pleasantly on the lips. We are indebted to Mr. Crozer, Mercer Co., N. J., for the following directions communicated for the *American Agriculturist.*

Egg Kisses.—Place in a clean, dry, metal or common china vessel, the whites of seven eggs—eight if small—and beat them to a stiff froth. While beating, add lemon, vanilla or other extract for flavoring if desired. Then, add by degrees one pound of pulverized white sugar, and mix it through lightly and quickly with the beater, but do not beat it. If stirred too long, it becomes soft, which should be avoided. Now, with a small sized tablespoon, or a teaspoon—gather the "snow" or paste by spoonfuls, and drop them about two inches apart, on paper laid upon a wet board, and immediately set them in the oven or stove.

N. B.—The eggs used should be comparatively fresh and *cold*, as they will form a stiffer froth, or "snow." Do not open the eggs until ready to use them. If any of the yolk should get with the whites, the egg-shell is the best "dipper" to remove it. Have the heat of the oven ready, when you commence beating the whites. Have ready, also, the sugar, and the board or boards wet with water, and the paper spread upon them. For a brisk oven, the boards may be about one inch thick; for a stove, perhaps ½ inch thick will do. Work each portion with the spoon, as it is gathered from the vessel, so as to remove any undue stiffness, that it may have a smooth surface when dropped upon the paper. If already soft or smooth in the vessel, this must not be done. Gather the same portion in the spoon each time, as near as possible. It must be dropped from the *side* of the spoon, and just as the last portion of each is ready to drop from the spoon, lower the spoon down to the right side of the drop, (lapping it over;) this makes each one smooth on top. If the "snow," in mixing, has become rather soft, some of the fine sugar may be sprinkled over the tops, just as they are set in the oven. Half of the above quantity would be sufficient for "beginners." The oven or stove must be only moderately hot, so that the tops and sides will dry or bake without being colored brown, and to accomplish this, your skill or art in baking will be tested. No particular time can be given, as it depends entirely upon the heat. The damp or wet paper under each drop prevents the bottoms from drying, and keeps them soft inside. When you find there is a middling firm crust formed on them, and they will move or slip a little upon the paper; they may be taken from the oven, and quickly removed from the paper, laying each with the bottom upwards, until you have removed them all, when two may be gently pressed together, bottom to bottom.

Jelly Kisses.—Made same as the above. When they are taken from the paper, after baking, place a little of any kind of jelly on the bottoms of each, then place two together, as before. The Jelly should not come near the edge, as it may be squeezed out, when put together.

Chocolate Kisses.—Prepare the mixture as before, and just before setting them in the oven, sprinkle over the top of each some finely grated chocolate. These have a very pretty appearance, and are rich and delicate to those who love the taste of chocolate.

Cream Kisses or Shells.—These are made from the same mixture, but somewhat larger and baked in the same manner. They are not put together, but after taking them from the paper, the inside soft portion is scooped out with a spoon, leaving a mere shell. These are laid away to dry. When wanted for an ornament to the table, take thick cream and beat it to a light, stiff foam, and fill the shells with it, and arrange them on a plate or dish. If any small fruits are in season, such as strawberries, currants, etc., these shells may be ornamented by placing some of the berries on top of the cream.

Poland Kisses are baked upon pans or tins, and are not placed together. Grease one or more clean baking tins slightly with lard. When the lard is cold, dust the greased surface with flour, using only enough to give a uniform white appearance. Prepare the mixture of eggs and sugar, and, with a spoon, drop them upon the pan as the Egg Kisses are dropped on paper, leaving the space of an inch or so, between them, and set them into the oven or stove. When a firm crust has formed upon the top, and they can be moved on the pan, take them out and immediately remove them from the pan. These are not so soft inside as the others; but will keep better.

Almond Kisses are made and baked as the Poland Kisses, but just before setting them in the stove, sprinkle over the top of each some fine slips of blanched almonds. Besides the making of "Kisses," this *snow* can be used to ornament Pies, Tarts, Custards, etc., by spreading some of it on top of these articles, and setting them in the stove for a few minutes to dry.

The Editor with his Young Readers.

HOW DOES YOUR PICTURE LOOK?

When daguerreotyping was first invented, every body thought it very wonderful. It was a surprising discovery, that light could be so managed as to make a picture. Most of you have seen it done and perhaps had your portraits taken in this way. No doubt you and your parents were very careful that you should look as well as possible when the picture was made. The best clothes were put on, hands and face washed, hair brushed, and then, when the apparatus was ready, you tried to look as pleasant as possible, for a cross expression, a scowl or a frown would have spoiled the whole. We have noticed a more wonderful process by which likenesses are produced. We have seen girls and boys making pictures of themselves, not on paper, or a metal or glass plate, as daguerreotypes are taken, but on material much more lasting; and the work was so well done that it was almost impossible to rub out the image. No particular skill is required; for it is oftenest done when you are not even thinking about it. But what is still more surprising, and greatly to be regretted, is that so little pains should be taken to have a good impression made. Frowns and scowls, as well as smiles, surly and unkind words, and improper actions are thrown out apparently without a thought, and down they go in the picture, for by the method we are writing of, even words are taken. In short, girls and boys, we are all making living likenesses of ourselves. Now to solve the puzzle, for you are perhaps wondering what all this means, take notice of your younger brothers and sisters, and playmates, and see how they are constantly imitating you, or observe how you copy after older persons. Why did little four-year-old Johnny call out when talking very earnestly the other day, "I'll bet you a dollar!" He heard it from some thoughtless person, and it made its impression, and thus too, profane words make their mark upon those who hear them. In this way, bad habits of every sort spread like diseases from one to another, mostly from older to younger persons. But good character too, repeats itself in like manner, and a boy or a man who does right is making living pictures of himself in those around him—so keep your eye bright, your tongue true, and hands innocent, and then you will not be ashamed of your likeness.

KEEP COOL.

The pupils of the Primary department in a large public school in this city, numbering near four hundred children, were one day seated quietly in their room when a mouse suddenly popped out from a knot-hole in the wainscoting and ran across the feet of a little girl. She sprang up in a great fright and commenced screaming, which so startled the other children that many of them also began to cry out loudly, and a general panic ensued which the teachers tried in vain to quell. Some thought the house was on fire, others that the walls were falling, and a rush was made for the street. The girls in the rooms above, hearing the noise, were also frightened into a panic, and ran pell-mell down stairs, and next, some three hundred boys from the highest department followed, pushing, scrambling and shouting until in a few minutes all were out. The people passing at the time hearing the noise and seeing the confusion raised the cry of fire, and soon the bells rang, the firemen turned out with their engines, parents came rushing to the spot, and the whole of that part of the city was startled with the false news that a school house full of children was being burned—and all this hubbub from one little mouse. Fortunately no one was injured, but there was very great danger. In the rush down the stairs many might have been killed or maimed. In a somewhat similar case where the fright arose from the fainting of a teacher, thirty or forty children either lost their lives or were seriously injured. Danger is never lessened, but always increased by fright. When any thing startling occurs repeat to yourselves these words; "Keep cool," and do it, and half the danger will be over. If a horse runs away, don't spring at once from the wagon to strike on your head or break your bones; "keep cool," watch your chances, and stay in or climb out as may seem best. By having your wits about you, it will be easy to discover the best way of escape from any peril.

ANSWERS TO PROBLEMS.

Were puzzles No. 10 and 11 too difficult for you? We have received but *one* correct answer, and shall keep the solutions another month. Try again, and send in a *string* of names.

No. 12. Labyrinth.—Drawings of the right path to the center have been received from Wm. H. Valentine Matthew E. Henderson, Jarvis H. Arnold, D. S. Carver. (Stick to the Try Company.)

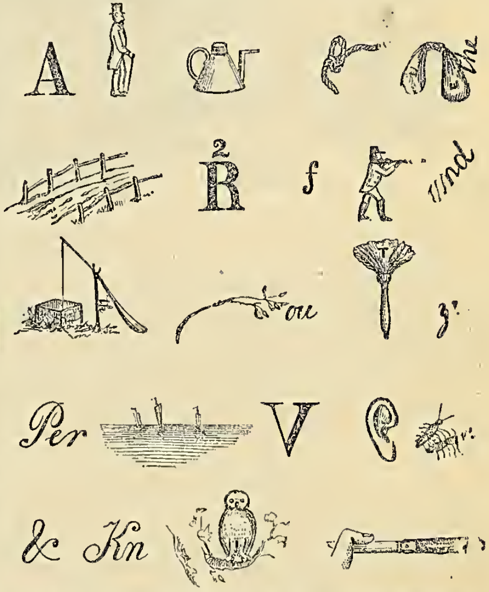
Additional correct answers to problems in the March No., received too late for previous notice.

No. 8. Economical Fencing.—D. White, Wm. B. Kircher, W. M. Summers, Wm. Myers, A. R. S., Thomas Love, A. A. Stephenson, F. Flake, Jr., Edward T. Smith, Elias Slagh.

No. 9. Coins.—D. White, Edw. Wilcox, [illegible] H. Miller, Oliver S. Follett, Jas. H. Dony, Edw. T. Smith.

NEW PROBLEMS.

No. 13. *Illustrated Rebus*, by J. N. Jameson, Ulster Co., N. Y., contains much truth.



No. 14. *Anagrams.*—By this is meant the transpositions or change of the letters in a word so as to form a sentence. Here are four examples of sentences each of which you can change into a single word:

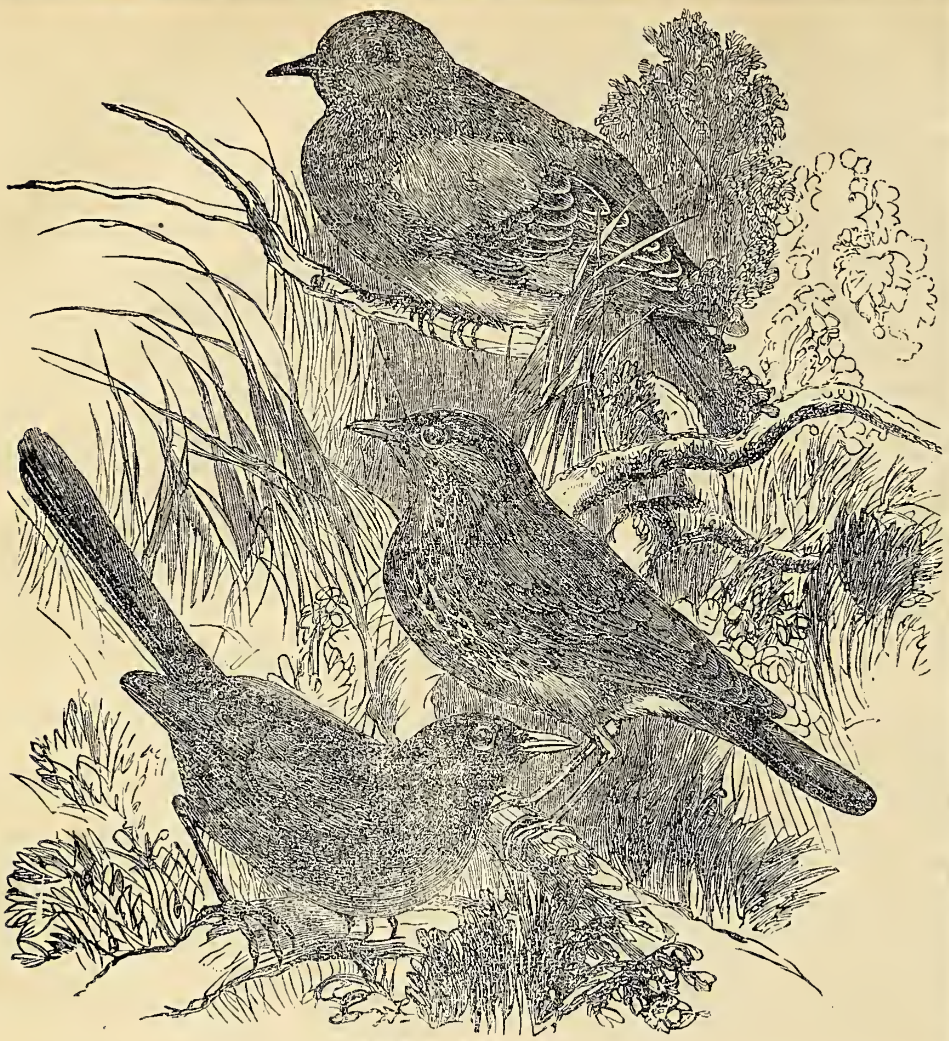
I've no Tax.	No lies etc.
Rural grist I cut.	Ah! of sin.

To get these into shape, a convenient plan is to write each letter upon a separate bit of paper or card, and then place them side by side so that they will spell out a word

No. 15. *Arithmetical Problem.*—A man has a plank 19 feet long, 12 inches wide at one end, and 6 inches wide at the other. At what distance from the wide end shall he cut it in two, so as to have each piece contain the same number of square inches?

A REAL "BACKBITER"

A gentleman recently related the following anecdote of Hon. N. P. Banks, of Massachusetts, late Speaker of the House of Representatives, with whom he was a playmate when a boy. They took great pleasure in setting traps for rabbits in Winter time, and were generally quite successful. One day they found the trap sprung, and peeping cautiously within the box, discovered a lively little red squirrel, with his bright black eyes wide open for a chance to escape. Our friend was for killing him at once, but young Banks proposed that they take him home and tame him, which was agreed to. They carried him safely to the house and to an upper room, closed the door, and let him loose. He scampered about, sprang at the



SONG BIRDS.
(Engraved for the American Agriculturist.)

windows, darted away again when they tried to catch him, and finally scrambled up the inside of the leg of Banks's pantaloons, scratching, as he went, clear up to his back between his shoulders. Here he was stopped by the suspenders, when he at once fixed his teeth firmly in the flesh, and held on until killed by being choked. We presume this cured the boys of trying to tame squirrels, and no doubt gave Mr. Banks a dislike of *backbiters* through life.

WELCOME GUESTS.

The birds are with us again after their long stay in the warm South, where they journeyed when Winter came storming from the North. They do not appear in flocks, as when they were preparing to leave us. Then, in almost every wood, you might see colonies of robins, meadow larks, thrushes, bobolinks and yellow hammers, birds which had not associated before, gathering together as if for a town meeting. They did not sing; they were too full of business for that, but each seemed to give his opinion, in a short, sharp chirp—perhaps they were voting on the choice of a leader—at any rate they were very harmonious, and quickly finished preparations for their long journey, and soon scarce a wing was left; except here and there a hardy fellow like the chickadee, all had flown together. Now they come flitting back in pairs, each has chosen his partner during the leisure of Winter, and they prefer the privacy of domestic life. The bluebird is furnishing the snug little retreat in the hollow limb of the apple tree prepared by the woodpecker last year, the robin peers cautiously about the evergreen near the house, to see if his loved family will be safe there, and the bobolink will soon sing and laugh, and scold all in a breath as he sees his spouse choosing her nesting place in the damp grass of the meadow.

Do you know the birds in the picture? We have re-engraved them from an English magazine. With one exception they are old friends of ours, and of yours. The lively, sharp eyed little fellow on the lower branch is the blackbird. He is a brisk wide-awake chap, as the grubs and worms in the plowed ground have good reason to know. Sometimes he follows in the furrow as it is freshly turned, and you will often see him give an eager snap at some unlucky, fat and lazy grub that lay dreaming of the good time coming when he would feast on the farmer's grain. In feeding himself and his family in the hedge yonder, he will save you bushels of corn which the worms would have destroyed. Some of our friends in the far West, where these birds come at times in immense flocks, may find it necessary to punish them for stealing their grain, but in most localities they protect far more than they eat. Show him by kind treatment that his services are appreciated.

Right above him in the picture is the song thrush, which is seen here only in cages. Even when a prisoner his delightful notes seem full of happy memories, and make you think of the green fields, pleasant streams and shady woods which were his home. He has an American cousin, the brown thrush, that you may often hear just at evening, sending out a sweet strain from the woods that sounds much like a soft, mellow whistle echoing through a long tube.

That demure little fellow at the top *can* sing, for all he looks so quiet. He knows more songs than any member of the grove choir. He can whistle like the quail, carol with the robin, twitter as blithely as the wren, and scream equal to the blue jay; in short, whatever tune he hears, he adds to his list, and will sometimes entertain you for hours with his varied accomplishments. Of course you recognize the mocking bird, a real native Southerner, seldom seen wild north of Virginia, but so much prized that he is a favorite for the cage. *Perhaps* a bird in a cage with plenty to eat and well cared for may be happy, but he does not look so, and if you leave the door open he will soon show his preference for liberty. Canaries, bred in confinement, which would die if exposed, may be kept as pets without cruelty, but there is more pleasure in listening to the song of a free bird, than the complaint of a prisoner however sweetly uttered.

CURIOUS VISITORS EXPECTED.

Many years ago, while we were visiting on a farm in the eastern part of this State, a large colony of strange visitors arrived in town, and it was said that similar colonies were swarming over a large portion of the adjoining country. They came in a singular manner. Each one had his own conveyance, a curious, *buggy like* contrivance in which all his property was packed. After their arrival they laid these aside, and seemed to care nothing more for them, but spent their time in roaming about the fields and woods, climbing the trees, sawing off the small branches, doing much mischief in this way. All the males carried musical instruments with them wherever they went, and kept up a continual din for weeks. Strange stories were told of them, as that they lived in caves under ground—some said they slept there for seventeen years at a time, and only came up to change their clothes, and exercise a little. They certainly did not remain long—in about five weeks after their first appearance not one could be found.

We did not learn much about them then, but have heard that this year they are expected to come again, and you will be much interested if they visit your town. Their name is Cicada Septendecim. Some persons call them the Seventeen Year Locust, but the locusts belong to a different family, being a species of grasshopper. These last are great eaters, and wo! to the crops when they appear in great numbers, as some kinds of them have done occasionally in this country. The Cicada we are describing comes up from the ground looking like a large brown bug, soon his jacket splits along the back, and a winged insect crawls out, and flies away to the woods. They have not been observed to eat anything, and only damage trees as described below. They take their meals probably under ground before changing to winged insects. The males make a peculiar noise with their wings, by rubbing them together as the Katy-did and the Harvest Fly do. The females have no music box, but are busy piercing the small twigs of trees, and depositing their eggs. They cut the twigs off, eggs and all drop to the ground, the insect hatches in the form of a small grub, and burrows in the earth where he remains seventeen years, and changes to a bug before coming up to take his turn at flying and singing. They die after a few weeks of rejoicing in the air and sunshine.

Colonies or swarms of them appear at different times in different places. The swarm this year is, by many persons, expected to appear along the valley of the Hudson River, and as far east as New Haven, through New-Jersey and a section of Pennsylvania, and in parts of Maryland, Virginia, and North Carolina. Be on the lookout for them through that section in the latter part of this month and the first of June, and if they come, watch them from day to day and try to get a thorough acquaintance with such singular creatures.

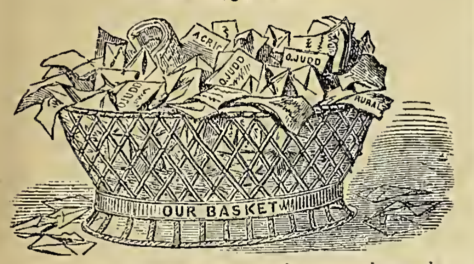
A GREAT LOSS.

A subscriber tells of an amusing circumstance which recently happened in his neighborhood. An old gentleman was observed early one morning to come from his room into the kitchen adjoining, where he commenced looking about as if hunting for something lost. He peeped under the table, felt behind the clock, and rummaged in every place where anything might be hid. He was asked what he was looking for? "I've lost myself," replied he, "I've looked every where and can not find myself." His friends were alarmed, thinking him deranged, when he suddenly looked up in great bewilderment, then laughed heartily, and explained that he had been asleep and dreamed he had lost himself. In his agitation he had got up, and was busy looking for his missing body when he awoke.—What could have occasioned such a curious dream! Probably this. For more than forty years the old gentleman had lived with his wife, a most estimable woman, whom he loved devotedly. They had always been as one, beginning life poor and working their way together honorably up to wealth. A few weeks previous to the dream, she had been called away by death, and day and night, the thought of his loss weighed him down with grief, and in dreams, his feelings gave shape to his thoughts—he seemed to have lost *himself*. It was a touching evidence of his love.

PRETTY NEARLY RIGHT.

"What is that, George?" asked a teacher of a young pupil, pointing to the mark (?) used to show that a question is asked. "A corkscrew," replied George. He had seen his father use a corkscrew nearly of that shape, and not knowing his punctuation marks, he gave a guess, which was not so far out of the way after all; for questions are corkscrews, with which to open bottles of knowledge. A boy who asks questions about everything he sees, will become well informed. It is not always necessary to consult other persons to gain knowledge. Ask questions of books, and of every thing you meet with. Inquire of the plants about their stems, and leaves, and flowers, ask the insects how they live; they will answer, not in words, but by showing you, if you observe them carefully and patiently from day to day. In this way by examining and questioning whatever they saw, philosophers have become distinguished for their knowledge. They drew out their wisdom with a ?

JUDGING FROM APPEARANCES.—A lady in Nashville was making a visit to the Penitentiary. In one room she saw three women engaged in sewing, and turning to the keeper, who was showing her about, said to him in an undertone: "Dear me! the viciousest looking women I ever saw in my life! What were they put in here for?" "They are here," he replied, "because I am here; they are my wife and daughters, madam!" But madam was traveling out as fast as possible.



Into which are thrown all sorts of paragraphs—such as Notes *and* Replies *to* Correspondents, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

Personal Queries.—In addition to what was said last month, it is proper to state, that the time of the Editors, in one sense, belongs to the great mass of their readers, and can not be justly devoted to questions which concern only the asker. Here are examples. One man has found on his farm some shining ore (probably worthless sulphide of iron) and he sends us samples and wants to know if it contain silver or gold. To answer positively, would require at least some hours of chemical investigation, and perhaps an analysis costing $5 to $10, to say nothing of postage on a return letter not provided for. A hundred others describe their several fields, and ask how each shall be cultivated to the most profit—to answer which, would require in every case a careful study and investigation of all the circumstances of location, markets, available manures, previous culture, etc. Let our friends remember that time is money; that to write a letter or even read one, costs time; that individual subscriptions do not average a dime profit each; that we now expend in editorial labor alone over $5,000 a year—or more than the entire income of many journals. We will be just as patient and just as accommodating as we can; will continue to answer individual questions even, *as often* as we can—in short, do all we can to meet the wishes of all our readers—attending to questions of general interest first, and to those of individual interest afterwards, but there must be a limit. "Some things can be done as well as others"—and some can't.

Those Barn Plans, which were called for, have come in quite freely. Forty-seven plans were sent to our care. The plan that comes most nearly to what is desired, will be selected, and a correspondence opened with the sender, who will be entitled to the premium. We have examined several of the plans which seem to be worthy of notice, and perhaps illustration; and after the selection is made, if there be no objections, we shall be glad to examine them all at leisure, and make such gleanings from them as may appear to be useful, and we may have time and room for, during the year.

Don't Nickname—to Exchanges.—A number of our exchange papers which transfer articles from the *American Agriculturist*, give credit by adding the abbreviated words, *Am. Ag.* This is no doubt quite complimentary, as it presupposes every body knows this paper and will recognize the initials. We never did like nick-names however, particularly such outlandish sounding ones as the above. Moreover, there may be yet *a few* who have not seen this paper, and for their benefit, as well as for the reason above, we respectfully ask our friendly cotemporaries, who find articles worth copying, to use the *whole name*.

Massachusetts White Grape.—J. Leonard, Saratoga Co., N. Y., and others. We have not tried this grape, which has been so highly lauded in the advertisements of a Cape Cod nurseryman, and it is not necessary to look after it, after reading the following in the Annual Report of the Massachusetts Horticultural Society: "......The woods of Massachusetts abound with grapes of similar quality....It has all the strongly marked characteristics of the Wild Fox or Bullitt grape, and is utterly unfit for cultivation."

Raising Grapes from Seed.—E. Ferguson, Monroe Co., N. Y., in alluding to the article under the above head, in the Feb. *Agriculturist*, page 51, says he has been raising seedling grapes for the last ten years, and has produced thousands of plants, but during all this time has only succeeded in getting one really good grape, and that the remark in that article "that 99 out of each 100 seedlings would not be worth raising," was not even strong enough. We do not mention this to deter those who are engaged in the praiseworthy effort of adding to our stock of American seedling grapes, but to show to the novice what a laborious operation it is to produce a really fine grape.

Situation for a Vineyard.—J. C. Oaks, Perry Co., Mo. A side hill is preferable for the vine, unless it slopes towards the north. The inquiries of yourself and others as to sorts, are answered in former numbers.

Root Grafting.—E. Fobes, Penobscot Co., Me We are opposed to root grafting in all cases. Some nurserymen still advocate it, as the operation can be performed during the Winter, upon trees taken up in the Fall. If practiced at all, only entire roots of small trees should be used, instead of bits of roots, at one time recommended. Our objections are that transplanting a tree after it has just been grafted, so enfeebles its growth that only a weak shoot is thrown up the first season, and another year is required to form a good stocky trunk. It is always better to have a trunk formed by a single season's growth. The next year will give it a good head. Nurserymen practice root grafting much less now than formerly.

Grafting the Hickory.—F. Meissner, Lee Co., Iowa; S. Smith and others. The thick shelled, or "pig walnuts," may be improved by grafting the shag-bark or thin shelled variety upon them, either in the branches or upon the stocks of young trees. The English walnut, (Madeira nut,) can also be grafted upon the hickory. We question whether it would do well upon the black walnut.

To Prevent Forked Trees splitting.—J. T. Moxley, Sheboygan Co., Wis., recommends to twist or wind together a few of the smaller limbs above the fork, which will grow in that position as the tree increases in size, and form a natural brace. He states that he has many trees successfully treated in this manner. We have prevented forked trees inclined to split, and even secured those that had already commenced to part, by boring through with an inch auger and driving in a strong wooden pin. A smaller iron bolt, with a head on one end and a nut on the other end is even better. The new growth will soon cover the pin or bolt.

Downer's Prolific Strawberry.—F. W. Adee, Queens Co., N. Y. Plants of this wonderful berry, "larger than the largest, better than the best, more prolific than the greatest bearers," we hear, are now being sent out at $5 per dozen. Whether the $10,000 are secured, Mr. Downer does not inform us, but those who will send him $5 are no longer to be without a berry which combines all the good qualities of its predecessors, and which leaves nothing to be desired. But seriously, we advise you to wait one season longer, and you will probably find enough at a price sufficiently low to pay for the loss and disappointment of being without them for a year. We question its superiority over some of our well proved and popular varieties.

May Queen Strawberry.—S. S. Thompson, Salem Co., N. J., thinks this strawberry is not sufficiently known, as he does not find it in the books. He describes it as a solid, pale red berry, early and prolific. This is about the character given it in the few books or catalogues which mention it. It is called a good market berry, although rather acid to rank as No. 1 for the table.

Helianthus Tuberosus—(Jerusalem Artichoke.) W., Franklin Co., Mo. This South American plant is cultivated to some extent both for the table and for stock. It is not considered as good as the potato for cattle or hogs, but will yield more per acre. Most seed dealers can furnish the tubers for planting.

A California Carrot Crop.—M. G. Tucker of Crescent City, California, sends an account of his last year's carrot crop on the Klamath Indian Reserve. Six acres of light sandy loam were sown in drills 18 inches apart, the seed being put in thickly, and the plants afterwards thinned out. The yield appeared so large that the product of one acre was carefully weighed, the tops being cut off close before the weighing. The result was 101,600 pounds, or nearly *fifty one tons to the acre!* Many of the carrots measured 30 inches in length, and weighed as high as 11 lbs. each. We do not remember to have seen so large a yield reported elsewhere. Mr. T. writes that the Indians are very fond of carrots.

Esparsette or Sanfoin.—M. Braun, Dallas Co., Iowa. The Sanfoin (Hedysarum *onobrychis*) does not flourish as well in this country as in Germany. It has been tried in the Northern States with indifferent success, not being sufficiently hardy to withstand the Winter. At the South it will probably do better, but we think lucerne would be preferable in your climate.

Loss of Young Queen Bees.—J. Butler, Jackson Co., Mich., writes that he has observed young queens in his hive from 10 to 14 days after the issue of the first swarm, but that 10 days later, the stock would be queenless. He asks for information "What was their fate?"

To Destroy Cut Worms.—E. Armantrout, Clinton Co., Ind., writes, that the cut worm can be effectually destroyed, by making two or three holes in the ground near a plant, from five to eight inches deep with a sharp pointed stick of an inch or more in diameter, into which the worms will crawl after committing their depredations, never again to return. (Why not?—Ed.)

To kill Cabbage Lice, etc.—Michael Schott, Col. Co., Mo., recommends to sprinkle Cabbage plants infested with lice or other insects, with a strong tea made from elder leaves. He says, it has proved efficacious in his own practice. Perhaps it might be serviceable in other cases.

Anthracite Coal for Peach Borers.—Jno Ruddell, Carbon Co., Pa., writes that he has found fine Anthracite coal a preventive of destruction by the peach borer. He removes the earth from the trunk of the tree, down to where the roots spread, cuts out any worms found, and places about a peck of fine unburned coal in contact with the roots and trunk of each tree.

Antidote for Ants.—S. P. Shaples, Chester Co., Pa. Take a large sponge and sprinkle it with powdered sugar, letting it sift well down into the pores. Set this where the ants abound. They will soon swarm upon the bait; then soak the sponge in hot water, and sweeten them again. Continue this treatment until they are missing.

Lynching Rats.—E. L. Watts, La Salle Co., Ill., recommends catching a few straggling rats, dipping them in gas tar, and setting them free. He says the others will leave. [Like Mrs. Glass' recipe for cooking the hare. She begins: "First catch your hare, etc." Those straggling rats are not so easily caught.—Ed.]

Using Muck—Ashes—Lime.—N. A. Smith of Franklin Co., Mass., writes: "We use a large amount of muck composted with stable manure and in the yards, and with great benefit. It operates finely also when composted with ashes, but these cost us 22 to 25 cents per bushel. Is there not some cheaper alkali than ashes at these prices?"....Ashes are best. because the very soluble alkali, potash, is readily diffused throughout the muck-heap. There is vastly more alkali in a bushel of lime freshly slaked than in the small percentage of potash in a bushel of ashes, but it is not so soluble. Still, it is probable that unslaked lime at a dollar or less per bbl. is cheaper than ashes at 20 cts. per bushel, provided the lime be slaked just before using, and be thoroughly mixed through the heap. The excess of carbonic acid from the decomposing muck, renders the lime somewhat soluble

More Laying Hens.—A subscriber at North Shore, Staten Island, the doings of whose poultry were given at page 37 of last volume, gives us the following report for 1859: Eggs laid by 30 hens in January, 238; in Feb. 336; in March 478; in April 406; in May 334; in June 311; in July 306: in Aug. 308; in Sept. 257; in Oct. 137; in Nov. 145; in Dec. 365—Total for the year 3621, or an average of 120 to each hen. (That is certainly eggs-cellent.) In January, 1860, 46 hens laid 421 eggs, and they were doing still better in February. In the above case the secrets of Subscriber's success in Winter consisted of: warm house; ample yard room; plenty of grain; meat scraps; kitchen refuse; chopped cabbages; pounded bones or oyster shells; and clean water.

Blackbirds not Useful.—Newton Southworth, of Scott Co., Minn., in allusion to the plea that blackbirds do more good than harm, by destroying insects, says that these birds are so numerous there, as to destroy their corn crops when ripening. His own corn was half carried off in two days. "You may kill them with strychnine by the thousand, but ten thousand will come to the funeral, and take a lunch while there. Put 50 men on two acres with guns, and let them blaze away, and the impudent birds will sit and eat within ten feet of each man, and almost tell you to load and fire until you are satisfied—they wont miss from their number all you can kill"....Under *such* circumstances, we should withdraw our plea for the birds —but this is an exception to a general rule.

Sugar-Cane Mills—Lost Seeds.—Dr. D. P. of Arkansas, and two or three others will probably get the specific information they desire by addressing John H. Lidgerwood & Co, 195 Pearl-st., New-York, or Hedges & Free, Cincinnati, Ohio....The seeds for Dr. P. which were broken open and abstracted, we have sent again, and will be happy to do the same in other similar cases, when we have the seeds still on hand.

Sheet Lead for Roofing.—John Day, Ozaukee Co., Wis. We are not familiar with this; tin (tinned iron) is much cheaper here than lead. Lead may perhaps be cheaper with you, but we think not. You can readily estimate the comparative cost per square foot, after ascertaining the relative price of the two articles in your locality. Lead sheets can readily be joined by locking and then solder with the aid of sal-ammoniac, or a solution of zinc in muriatic (hydro-chloric) acid—rubbing a little on before applying the solder.

Blackberry Seed Slow in Vegetating—To Several Inquirers.—Those who look for this seed to come up at once, will bear in mind that this is the case only under favorable circumstances of soil, moisture, and warmth. In the wild state, the seed frequently remains in or upon the soil for years before growing, and generally it lies over Winter. But planted on a good seed bed, near the surface, it will usually come up in a few weeks. If it does not appear soon, do not disturb it, further than to *cut down* weeds closely; if the weeds are pulled up, the seed may be disturbed. Its vegetation may be hastened by soaking the seed in lukewarm water, for a few hours before planting.

Winter Cherries from Cuttings.—A subscriber in Ontario Co., N. Y., writes that having lost most of his Winter Cherries last Summer by insects, he took cuttings from a few left in the hot-bed, which had already commenced blooming, and set them out the same as in transplanting. They took root, grew well, and yielded better even than the seedlings.

The New Austin Strawberry.—New mode of Introducing fruits.—It will be seen by reference to a card in the advertising columns, that this strawberry, for which high claims are put forth, is to be exhibited at our office and elsewhere, during next month. This idea of the proprietors is a good one, and worthy of imitation. They will in the end find it more profitable than the "open-your-mouth-and-shut-your-eyes" schemes of some operators who profess to insist on having a certain number of orders at high prices, before allowing their fruits to be seen, or at least to come before the public. The confidence thus shown in the new strawberry, by the propagators themselves, gives us reason to hope it may prove a valuable acquisition.

Yellow Fleshed Peach Blow Potato.—Robert D. Weeks, Essex Co., writes that a potato called the Peach Blow, has been cultivated in the towns on the Connecticut river, for 12 or 15 years past. He describes it as of large size, very productive, of bright red color and a good keeper, but yellow fleshed, of strong flavor, and third rate quality for the table. This is a very different article from what is known in this market as the Peach Blow.

Cutting off Corn Roots.—E. C. H., inquires if cutting the young corn roots when hoeing, injures the plants. Yes, without doubt. Every root draws sap and nourishment for the use of the stalk, from the surrounding soil. Weeds should be kept down, however, even if some of the corn roots are broken.

"The Empire Dairyman," is the name applied to an apparatus for heating milk for cheese making, the invention of Messrs. Redington & McClure, of Chautauque Co., N. Y. We have not seen it in operation, but from a somewhat careful examination of its construction, it seems well adapted to uniform and careful heating of milk, and we think it worthy the attention of cheese manufacturers.

Teaching Calves Mischief.—B., Bethel, Me., condemns the practice of teaching calves to drink, by fastening a piece of leather or cloth to the feeding trough for them to suck. He says, it teaches them to gnaw harness, blankets, etc., by which mischief is done. A neighbor of his had a valuable harness spoiled by a calf taught in this way. We would not trust any calf with our harness or blankets, whatever might have been his first lessons in drinking; young animals, like young children, try to get everything into their mouths.

Milking Once a Day.—"Farmer's Daughter, Chippewa, C. W. The amount of milk would be much diminished by milking only once a day, and the cow would dry up much sooner. Frequent milking, in imitation of the frequent draughts made by the calf, tends to an increased flow of milk.

Black Leg in Calves.—D. L. Smith. This is said to result sometimes from sudden change in the quality of the food. Overfed young animals, and those in very low condition are most frequently attacked. Dr. Dadd recommends the following treatment. Mix 4 drachms spirits Hartshorn, and one quart of tar water, to this add 1 oz. Tincture of Bloodroot, and give as a drench. Four hours after, give a mixture of Liquid tar 1 oz. Glycerine, 4 oz. thin gruel 1 quart. If the animal shows lameness in the back or hind quarters, apply oil of Cedar 2 oz., Cod Liver oil 6 oz., Sulphuric Ether 2 oz., Tincture of Capsicum 1 oz. First mix the two oils, then add the Ether, shake them thoroughly, lastly add the Tincture.

How to Keep Eggs.—Eugene Snyder, Ulster Co., N. Y. By the following process, eggs have been kept good for a year. Pack fresh new laid eggs, small end downward in a cask. When all the eggs on hand at the time, are packed, cover them with a pickle made by dissolving two quarts of unslacked lime and two quarts of salt in four gallons of water. Make this pickle two or three days before wanted for use and stir it frequently; pour the milky liquid upon the eggs, and set the cask in a cool place where it will not freeze.

Singular Disease of Swine.—J. N. Watson, New York Co., informs us that a short time since, he purchased a Suffolk Boar, and noticed at the time a very red spot about the size of a man's hand upon the rump of the animal, but thought nothing of it. The redness soon extended until it covered the whole back and sides, and the animal died in two days. This would seem to be a form of erysipelas, but Mr. W. states that no other symptoms of that disease were present. He opened the animal after death, and found the internal organs apparently healthy. Can any one who has had swine similarly affected, throw light upon the subject?

Artificial Comb for Bees.—A gentleman just in from California, informs us that in San Francisco there is just now no little interest taken in a process of casting the bottoms of the cells of honey-comb from old wax. He says the bees will go on and complete the cells, and that this process not only furthers their work, but secures regularly formed combs in any position in the hive desired. How is this?

Specimens of Insects Named.—Emory Stanford, Vermillion(?) The insects about which you inquire, are probably a species of Coccinella, a description of which by Mrs. Taylor, will be found on page 140.

Green-House Plants.—F. O. Low, Penobscot Co., Me. "Buist's Flower Garden Directory," ($1.25,) is a very good work upon the treatment of plants in houses.

Pure Ground Spices.—Spices ready ground are a great convenience in the cooking department, but in this wicked and *adulterated* generation, as Mrs. Partington calls it, we can seldom know what sort of compounds are contained in the packages labeled Cinnamon, Ginger, Cloves, etc. Messrs. E. R. Durkee & Co., recently favored us with a lot of nice parcels of various spices which prove to be very good. If they will supply such spices to all their customers, they will deserve unlimited patronage.

Church for Deaf Mutes—A Worthy Charity.—The church for deaf mutes in Eighteenth Street, New-York, the only one of the kind in the United States, are making an appeal to the charitable for subscriptions of one dollar each, to relieve their institution from debt. We commend the object as a worthy one. Those who contribute are literally furnishing ears to the deaf, with which they may hear "glad tidings." Rev. Thomas Gallaudet is Rector, and will receive donations.

To Buy Mount Vernon—New York State Contributions.—We have received from Miss Mary M. Hamilton, Vice-Regent, per E. T. Montgomery, Sec., a detailed statement of the contributions to the fund raised in New-York State for the purchase of Mount Vernon, the homestead of Washington, which enterprize has been accomplished, the whole $200,000 having been raised. From this statement it appears that the country contributions amount to $34,886, 28. This, with $3,981,93 raised by Military Companies, Fire Departments, Schools, etc., makes the total amount raised in this State $38,868,21, or more than one-sixth of the entire sum.

New York State Agricultural Society.

The Annual Meeting of this Society was held at Albany, Feb. 8th and 9th. The Treasurer's report showed a prosperous financial condition, the receipts for the past year having been $24,410, and the expenses $18,724, leaving cash on hand, $5,686, to be diminished a little yet, by some unadjusted bills. The following officers were chosen for the present year. *President*—Hon. Benj. F. Huntington, of Oneida County. *Vice Presidents*—1st District, John Jay, of Westchester Co.; 2nd, Chas. S. Wainwright, of Dutchess Co.; 3d, Herman Wendall, of Albany; 4th, Calvin T. Hubburd, of St. Lawrence Co.: 5th, John Butterfield, of Oneida Co.; 6th, Francis M. Rotch, of Otsego Co.; 7th, Jas. O. Shelden, of Ontario Co.; 8th, T. C. Peters, of Genesee Co.;—*Cor. Secretary*—B. P. Johnson, of Albany. *Rec. Secretary*—Erastus Corning, of Albany. *Executive Committee*—Hon. A. B. Dickinson, of Steuben Co.; L. Chandler Ball, of Rensselaer: Chas. P. Wood, of Cayuga; Ezra Cornell of Tompkins; Samuel T. Thorne, of Dutchess.

Elmira was chosen as the place of the next Annual Exhibition. Major Patrick, Pres. of the N. Y. State Ag. College, presented the claims of that institution, stating that it would probably be open for pupils about April. 1. About $81,000 have been expended upon the institution, and some $20,000 more are required, which it is hoped the farmers of the State will soon make up.

Advertising Information Gratis.

We have not given our regular chapter under this head, in the present number, partly for want of room at this season, when the Calendar of Operations is most important, and partly because we think that at least all who read our last volume must, by this time, be pretty well initiated into the mode of operating adopted by a certain class of swindlers. A large number of circulars, etc., sent to us by our readers, in various parts of the country, indicate pretty clearly that they are alive to the necessity of turning a deaf ear to these "taking" circulars and advertisements. A chapter now and then, as new swindlers come up, or the old ones appear under a new garb, will probably be all that will be needed.

It may be well to say here, to those who have but recently subscribed to this journal, that as a rule, whenever you receive any of the advertisements and circulars now flooding the country, which offer some splendid chance to make a great deal of money for a small investment, or a sure cure for some disease, for a postage stamp or two, you may put it down that there is a 'cat in the meal tub.' The more specious the statements and promises, the more splendid the chance to make money, or secure profitable situations, the more likelihood there is that the thing is a humbug, though you may not be able to see how it can be. During a year past we have investigated many hundreds of very plausible and taking advertisements and circulars, and in almost every case with the same result. Of the hundreds of "dollars," "quarters," and "stamps for return postage" invested by us in these splendid "chances to make money," we have not received returns enough to amount to $5, all told.

The time and money expended in this enterprise we consider well laid out, for we have abundant evidence that hundreds of thousands of dollars have been saved to the pockets of our readers.

P. S.—A New Humbug to be avoided.—We have recently received from various parts of the country, sundry circulars, announcing a "magnificent scheme," offering 100,000 articles worth $3 to $100 each. You are promised *at least* a $3 article for each $1, with a chance for one worth $100; "and you need not send your dollar, until you know just which article you are to draw" *But* you must send 25 cents first, for a chance to draw, or, as the circular says, to pay expenses of certificate, postage, etc. To the unwary, this appears very plausible, yet we at first thought it so transparent a humbug, as not to need special notice.

But just as we go to press, we learn that some rascally postmasters, interested in the affair as paid agents, have had the impudence to intercept some of our own circulars, and inclose in them the printed announcement of this Philadelphia swindle—thus making it appear, that *we* endorse the thing. This very hour a subscriber from Westchester Co., N. Y., brings us one of these hand-bills, which had every appearance of having come directly from the *Agriculturist* office. As we learn that a number of postmasters are selling tickets for the scheme referred to, we here give notice that we shall show up every one of them detected in using our circulars. For special reasons we now withhold the name of one of them already detected, though we shall report him at once to Washington.

☞ And we here forewarn our readers, that any circular or other matter, appearing to come from our office, which in any way relates to any other business than that of the *Agriculturist* itself, is a bogus affair. We furnish no names to any one, and have only *one* kind of business, viz., that of publishing the *Agriculturist*. We ask every one receiving anything of the kind, to make it known to us promptly, with full particulars.

The Premiums Still Open.

[FOR SPECIAL PREMIUMS SEE LAST PAGE.]

[The premiums below are offered for subscribers to Volume XIX of the *American Agriculturist* whenever received. Those having partial lists made up can complete them, and other new lists can still be formed.]

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.*

REMARKS.—*The premiums below, except No. IV, are all for* NEW SUBSCRIBERS ONLY, *as we can only afford to pay premiums for once on the same subscriber. But* ☞ *in making up any premium lists, two renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞ *Names need not all be at the same Post Office.*

Every person collecting names for premiums, can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

Any premium will be paid as soon as the list for it is completed, if we have the duplicate lists to refer to.

Premium III.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid. (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8½ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines,** new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two years' use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia,* now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Price, $45.

Premium XIII.—To every person sending 260 *new* subscribers at $1 each, or 330 at the lowest club price (80 cts. each), we will present one of *Allen's Mowing Machines,* with sundry improvements now being added. This is one of the best we have seen in operation. Price $115. Other kinds of Machines of the same price, will be substituted, when specially desired, if satisfactory arrangements can be made with the manufacturers.

Premium XIV.—To every person sending 65 *new* subscribers, at 80 cents each, we will present one of the best *Eagle Plows* (2-horse). Price $11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 *new* subscribers at 80 cents each, we will present the best *Subsoil Plow* (two-horse), price $8; *or* one of the best *Horse-Hoes,* price $8; *or* one of the best *Straw and Hay Cutters,* price $8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 *new* subscribers, at 80 cents each, we will present one of the best *Steel-tooth Cultivators.* Price $7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best *Hand Corn Shellers.* Price $6.50.

Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3,) or a *Double mold-board (ridging) Plow.* Price $3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from C. M. Saxton & Co's Catalogue, to the amount of 10 cents for every subscriber sent in at 80 cents each.

Business Notices.

☞ *Sixty Cents a Line of Space.*

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No. 495 Broadway, New-York; No. 18 Summer st., Boston; No. 730 Chestnut st., Philadelphia; No. 181 Baltimore st., Baltimore; No. 58 West Fourth st., Cincinnati. * * *For our own family use* we became *fully satisfied that Grover & Baker's is the best, and we accordingly purchased it."—American Agriculturist.*

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Are pronounced by the most competent judges to be *the best,* giving the largest amount of heat, with a small quantity of fuel—owing to their being so constructed as to burn the gases and smoke, and with the largest radiating surface so arranged as to warm the air rapidly to a soft summer heat.

Eight sizes, adapted to warming only one or two rooms, or a whole house, churches, academies, public halls, &c.

THEY ALWAYS PLEASE.

THE NEW AIR-TIGHT CHALLENGE RANGE now ready.

Send for testimonials (free) to

SANFORD, TRUSLOW & CO., Manufacturers,
239 Water-street, New-York.

Market Review, Weather Notes, etc.

American Agriculturist Office,
New York, Wednesday Evening, April 18, 1860.

The market was quiet for all kinds of Breadstuffs, until about ten days ago, when an active inquiry arose, especially for Flour and Wheat, for which prices have advanced under the recent favorable news from England. The demand has been good, not only for home use, but for shipment, and on speculation. The receipts have not been equal to the average daily sales, and the stocks in first hands have been much reduced. Higher prices have obtained latterly, and desirable lots have been held with much firmness. The bulk of the transactions in Wheat have been in Milwaukee Club wheat, and Chicago Spring wheat, the supplies of which have been large. The rise in freights has tended to check export movements, and and just now there is less activity, and less buoyancy in the market. Yet, the leading receivers are not disposed to press sales, as they look for an improvement, which will enable them to dispose of their stocks more advantageously later in the Spring. The prospect of an export business is more encouraging, and this circumstance tends to increase the confidence of holders. The resumption of inland navigation has not added much to the current arrivals....Corn has been freely offered and purchased, but at reduced prices, the market closing heavily....Rye and Barley have been in moderate demand. The supply of each is fair, for the season....Oats have attracted more attention and have advanced ...The movements in Cotton and Provisions have been limited, and the changes in prices have not been very important. ....Hay has been in good request, and it closes higher, with less offering....Hops have been in lively demand, but at lower rates....Rice, Seeds, and Tobacco, have been less active....Wool has been dull and heavy, with a downward tendency....Feathers, Hemp, and Tallow have been quiet....The transactions in most other kinds of Produce have been limited.

CURRENT WHOLESALE PRICES.

	March. 17.	April. 18.
FLOUR—Superf to Extra State	$5 25 @ 5 60	$5 30 @ 5 55
Superfine Western	5 25 @ 5 40	5 30 @ 5 35
Extra Western	5 45 @ 7 50	5 45 @ 7 75
Fancy to Extra Genesee	5 70 @ 7 50	5 60 @ 7 50
Super. to Extra Southern	6 10 @ 7 50	6 20 @ 7 60
RYE FLOUR—Fine and Super	3 60 @ 4 40	3 50 @ 4 25
CORN MEAL	3 55 @ 4 15	3 55 @ 4 65
WHEAT—Canada White	1 50 @ 1 65	1 50 @ 1 65
Western White	1 50 @ 1 70	1 50 @ 1 70
Southern White	1 55 @ 1 70	1 55 @ 1 72½
All kinds of Red	1 22½ @ 1 50	1 21 @ 1 50
CORN—Yellow	76 @ 79	75 @ 76
White	75 @ 79	76 @ 79½
Mixed	77 @ 78	72½ @ 74
OATS—Western	43 @ 43½	44 @ 45
State	43½ @ 44½	45 @ 45½
Southern	38 @ 40	39 @ 42½
RYE	85 @ 87	83 @ 84½
BARLEY	75 @ 88	70 @ 85
White Beans	90 @ 1 12½	85 @ 1 10
HAY, in bales, per 100 lbs	87½ @ 1 12½	90 @ 1 10
COTTON—Middlings, per lb	11⅛ @ 11½	11⅛ @ 11½
RICE, per 100 lbs	3 50 @ 4 25	3 50 @ 4 37½
HOPS, crop of 1859 per lb	6 @ 15	5 @ 15
PORK—Old Mess, per bbl	17 25 @ 17 35	17 37 @
Prime, old, per bbl	12 50 @	12 75 @ 13 00
BEEF—Repacked Mess	9 25 @ 10 50	9 00 @ 10 50
Country mess	5 25 @ 5 50	5 00 @ 6 00
HOGS, Dressed corn, per lb	8¼ @ 8½	
Lard, in bbls. per lb	10¾ @ 11¼	10½ @ 11
BUTTER—Western, per lb	11 @ 15	10 @ 15
State, per lb	14 @ 21	11 @ 22
CHEESE, per lb	10 @ 13	9½ @ 13
EGGS—Fresh, per dozen	19 @ 20	13½ @ 14
POULTRY—Fowls, per lb	10 @ 12	14 @ 15
Geese, per lb	8 @ 10	10 @ 12
Ducks, per lb	18 @ 20	18 @ 20
Turkeys, per lb	15 @ 18	15 @ 17
Wild Pigeons, per doz	50 @ 75	1 00 @ 1 25
Partridges, per pair	50 @ 75	75 @ 87
FEATHERS, Live Geese per lb	42½ @ 50	44 @ 50
SEED—Clover, per lb	7¼ @ 8	7¼ @ 8
Timothy, per bushel	3 00 @ 3 62½	3 25 @ 3 75
SUGAR, Brown, per lb	6 @ 8½	5¾ @ 8¼
MOLASSES, New-Orleans, pr gl	44 @ 49	45 @ 50
COFFEE, Rio, per lb	12 @ 14½	12¾ @ 14½
TOBACCO—Kentucky, &c. pr lb	4 @ 12½	4 @ 12½
Seed Leaf, per lb	6 @ 25	6 @ 25
WOOL—Domestic fleece, per lb	34 @ 58	34 @ 58
Domestic, pulled, per lb	28 @ 48	28 @ 48
HEMP—Undr'd Amer'n pr ton	120 @ 150	120 @ 150
Dressed American, per ton	160 @ 200	160 @ 200
TALLOW, per lb	10½ @ 10¾	10¼ @ 10½
OIL CAKE, per ton	33 00 @ 36 50	35 00 @ 37 00
APPLES—Dried, Per lb	5 @ 7	4½ @ 6
Dried Peaches—pr lb. South'n	10 @ 16	6 @ 14
Dried Raspberries, per lb	18 @ 20	18 @
POTATOES—Mercers, p. bbl	1 75 @ 2 12	1 50 @ 1 75
Peach Blows, per bbl	1 25 @ 1 75	1 25 @ 1 50
Nova Scotia, per bushel	55 @ 60	45 @ 50
CABBAGES, per 100	3 00 @ 5 00	2 50 @ 6 00
ONIONS, Red, per bbl	2 25 @	1 50 @
White and Yellow, per bush	2 00 @ 3 25	1 50 @ 2 50
TURNIPS, Rutabaga, per bbl	1 12 @	1 00 @ 1 25
APPLES, Winter, per bbl	2 75 @ 4 00	3 00 @ 5 00
STRAWBERRIES, South'n, p. qt		75 @ 87
ASPARAGUS, do., p. bunch		37 @ 75

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
27 bus. ds. *this* mon.	150,672	7,459	230,395	9,582	26,169	124,342
25 bus. days *last* mon.	67,819	4,242	195,813	6,915	39,965	62,933

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
27 business days *this* mon.,	260,580	488,250	727,000	69,000	167,000
25 business days *last* mon.,	295,040	325,950	415 100	44,150	21.,500

Breadstuffs exported from N. Y., from Jan. 1 to April 11.

	1859.	1860.
Wheat Flour, bbls	154,371	176,208
Rye Flour, bbls	2,189	2,403
Corn Meal, bbls	22,492	24,670
Wheat, bush	17,349	143,026
Corn, bush	57,314	156,157

The following is a statement of the exports of the principal kinds of Breadstuffs from the Atlantic ports of the United States since Sept. 1, 1859:

To Great Britain and Ireland.

From	To Date.	Flour, bbls.	Wheat, bu.	Corn, bu.
New-York	April 5, 1860	193,279	454,639	64,030
New-Orleans	April 1, 1860	12	——	5,025
Philadelphia	April 1, 1860	8,072	75,777	6,481
Baltimore	April 1, 1860	——	——	——
Boston	Mar. 16, 1860	733	——	——
Other Ports	Mar. 23, 1860	30	7,247	——
Total from Sept. 1, 1859		202,126	537,663	75,536
To about same period, 1858		85,758	415,800	319,450
To about same period, 1857		749,964	3,387,826	2,206,486
To about same period, 1856		769,802	6,870,904	4,016,846

To the Continent.

From	To Date	Flour, bbls.	Wheat, bu.	Corn, bu.
New-York	Mar. 27, 1860	27,678	——	11,985
Other Ports	Latest dates.	5,179	——	2,072

The following is a statement of the Receipts, and of the foreign Exports of Cotton since 1st September last, and of the Stock now on hand, compared with the five preceding years:

	RECEIPTS Since Sep. 1.	EXPORTS Since Sep. 1.	STOCK At present.
1859–60	4,077,000	2,859,000	893,000
1858–9	3,370,000	2,049,000	772,000
1857–8	2,518,000	1,539,000	760,000
1856–7	2,678,000	1,701,000	490,000
1855–6	2,998,000	2,031,000	619,000
1854–5	2,081,000	1,471,000	310,000

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been moderately supplied during the past five weeks, but amply sufficient for the wants of consumers during the season of Lent. Receipts 18,698 bullocks; an average of 3,739 per week. This is 724 above the corresponding month last year. Prices still remain depressed, varying but little from the quotations of the last report. The present rates this week, April 18th were for Prime 9½c.@10c.; Medium 8c.@8½c.; Poor 6c.@7½c. The general average of all sold this week 8c. per lb. estimated dressed weight.

VEAL CALVES have continued to come in plentifully, though not equal to last year. Receipts for five weeks just ended 4,716, an average of 943 per week. Receipts for the corresponding month last year 4,186, averaging 1,046 per week. Prices have declined to 4c.@6c. per lb. live weight.

SHEEP AND LAMBS have been rather scarce, the number received being 23,227 against 22,680 received during the previous four weeks. Prices stood at last market 6 to 7c. per lb. live weight, for good quality with the wool on. A few extras brought 7½c.

HOGS.—Receipts have increased in supply somewhat over previous month. The number amounting to 22,279. Prices have varied but slightly, standing at 6¼c. to 6⅝c. live weight for Corn hogs, and 6c.@6⅛c. for distillery fed. The demand is not very large.

The Weather since our last report, (March 18) has been variable—but upon the whole quite favorable for out-door business. Vegetation is several days in advance of last season. The Winter grain looks well, and, in most localities fruit prospects are good. OUR DAILY NOTES condensed, read thus: *March* 18, cloudy A. M. clear P. M.—19, 20, cloudy, getting quite dry—21, cool, cloudy, with raw winds and clouds of dust—22, cloudy A. M., light N. E. snow storm P. M.—23, clear and moderate, two inches of snow on ground A. M. but melted during the day—24, windy, snow squalls—25, 26, 27, 28 29, clear and fine mild weather—30, 31, clear and hot, dry ——*April* 1, warm, cloudy day with rain at night—2, 3, clear and cool with frost—4, cloudy, with fall of needed rain P. M. and at night—5, 6, clear, fine and warm—7, cloudy, light rain at night—8, cloudy—9, 10, 11, cloudy, raining moderately most of the time; ground sufficiently wet—12, clear and fine—13, showery—14, cold showers, and flakes of snow—snow at the north and northwest—15, clear and quite cold, mercury 31°, ground frozen—16, cool, with rain P. M.—17, cloudy, city plum trees in bloom in sheltered situations—18, clear and mild.

Thermometer at 7 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) *s* indicates snow; *r* rain.]

JANUARY, 1860.

1......8°	8......36	15......34	22......35	29......22
2......7	9......33	16......34	23......37	30......38
3......12	10......36	17......34	24......32	31......41*s*
4......24*s*	11......35	18......29	25......46	
5......12	12......32*s*	19......32	26......34*s*	893
6......12	13......28	20......30	27......23	Aver'e..29
7......29*r*	14......26*r*	21......38	28......24	

FEBRUARY.

1......10*s*	7......40	13......30*r*	19......19	25......28*s*
2......5	8......30	14......41	20......18	26......28
3......8	9......29	15......26	21......30	27......33
4......23*s*	10......22	16......28*s*	22......35*r*	28......41
5......22	11......16*s*	17......12	23......49	29......36
6......42*r*	12......23	18......18*s*	24......41	Aver'e..27

MARCH.

1......47*r*	8......38*r*	15......33	22......28*s*	29......36
2......50	9......34*s*	16......32	23......26	30......42
3......39*r*	10......31	17......36	24......30	31......48
4......46	11......31	18......36	25......32	
5......34	12......37*r*	19......41	26......33	1138
6......44	13......34	20......41	27......30	Aver'e..37
7......38*r*	14......34	21......37	28......34	

APRIL.

1......53*r*	5......49*r*	8......43*r*	11......43*r*	14......45*r*
2......33	6......45	9......50*r*	12......42	15......31
3......30	7......38	10......45*r*	13......46*s*	16......38
4......47*r*				

Notes on Postage.

—o—

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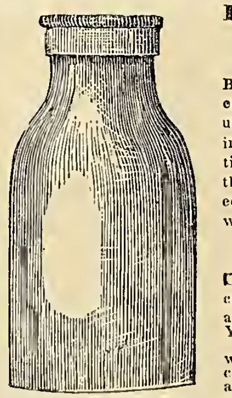

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50 "	10 " " " "	4 00
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Weymouth Pine	do.	3 00
Pitch Pine	do.	3.00
Scotch Fir	do.	1.50
Chinese Arbor Vitæ	do.	3.00
American Bald Cypress (beautiful), per qt		30
Strawberry Tree (*Arbutus Unedo*) per oz		25
Buckthorn Seed, per lb		1.00
Osage Orange, per qt		75
Honey Locust for Hedges, per lb		75
Yellow Locust for Timber, per lb		75
Virgilia Lutea, (very rare) per packet		25

☞ Send for our Catalogues.

J. M. THORBURN & CO.,
15 John-st., New-York.

TO WHOLESALE DEALERS IN GARDEN, FIELD, and GRASS SEEDS.—I have taken the greatest care in raising and selecting a large and pure stock of every variety of Seeds required by the Gardener, Farmer, and Planter, and purchasers may depend on their being fresh and true to name.

Sales will be made in bulk, by the ounce, pound, quart, bushel, or in papers distinctly labeled.

My Seed List contains all the old varieties, and many new kinds, all of the very best quality, and chiefly raised for me.

FRUIT SEEDS—Apple, Pear, Quince, Plum, Apricot, Cherry, Currant, Gooseberry, Raspberry, Strawberry, Peach, &c.

HEDGES—Honey Locust, Yellow Locust, Buckthorn, Osage Orange, Arbor Vitæ, &c.

BOOKS—All works furnished at publisher's prices

My prices are as low as any others for the same quality of seeds.

Orders by mail will be attended to with exactness and promptitude. R. L. ALLEN, 191 Water-st, New-York.

Long Orange Carrot.

Acknowledged by all cultivators to be the most valuable root crop now in cultivation.

We have a limited supply of seed raised from the finest stock in the world. PRICE PER POUND, $1.00, or at reduced rates in large quantities.

ALSO

Large White Sugar Beet	per lb	50c.
Long Red Mangel Wurtzel	do.	50c
Yellow Globe do.	do.	50c.
Long Blood Beet	do.	75c.
Long Smooth Blood Beet	do.	75c.
Premium Flat Dutch Cabbage	do.	2 50c.
Extra Fine Large Drumhead Cabbage	do.	2 50c.
True White Spined Cucumber	do.	75c.
Improved Dwarf Okra	do.	75c.
Large Red and Yellow Onion each	do.	1 00
Large White Onion	do.	1 50

Turnips, Long White French, and 20 other sorts, each pr. lb. 75c,
Dioscorea Batatas (Tubers) or Chinese Potatoes, 25c. per doz.
$1.50 per 100; $10 per 1000.

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J. M. THORBURN & CO.,
15 John-st., New-York.

NEW VALUABLE SQUASH SEED.

BY MAIL, POST-PAID.

White Leghorn	Per Packet	25cts.
Mammoth Cuba	do.	25cts.
Mammoth Chili	do.	25cts.
Imported Lima Marrow	do.	25cts
Sandwich Island	do.	25cts.
True Hubbard, per lb. $1.50,	Per oz.	20cts.
True Seven Year Pumpkin	Per Packet	25cts.
Japan Apple Pie Melon	do	25cts.

☞ Send for our Catalogues.

J. M. THORBURN & CO,
15 John-st., New-York.

Hubbard Squash Seed.

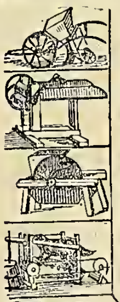
1000 lbs. of Hubbard Squash Seed for sale, very cheap, by the original introducer. My seed are of the purest quality, and my prices at the lowest rates. Circulars and placards supplied by the quantity, gratis. JAMES J. H. GREGORY,
Marblehead, Mass.

JOSEPH E. MACOMBER, Wholesale Vegetable Seed raiser, Portsmouth, R. I.

Excelsior Agricultural Works,
Albany, N. Y.
CHARLES E. PEASE, Proprietor.

(Successor to RICHARD H. PEASE.)

Farmers and Dealers in Agricultural Machines will find it to their interest to patronize this establishment, where they can be supplied with the very best



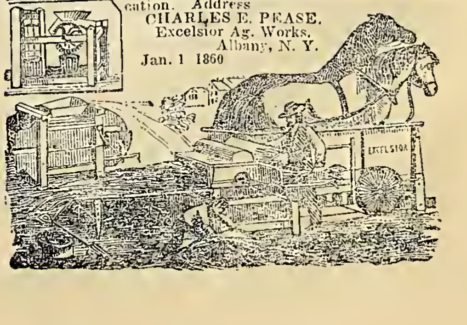
ENDLESS CHAIN HORSE POWERS, for one or two horses; Lever or Sweep Horse Powers; Improved Threshers and Separators and Cleaners; Circular Saw Mills for cord wood; Cross Cut Saw Mills for cross cutting lumber; Krauser's Patent and Philo's Cider Mills; Corn Shellers; Clover Hullers; Dog Powers for churning, &c., &c; Wilson's Patent Telegraph Fodder Cutters, &c., &c.

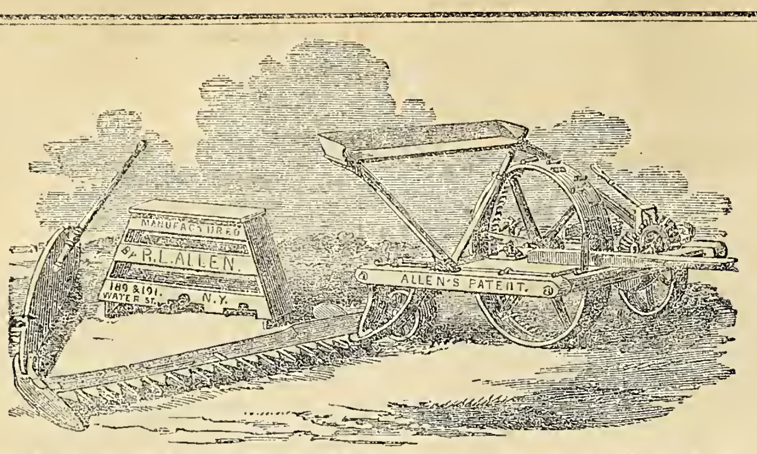
Manufacturing none but the most approved Implements that have been thoroughly and practically tested, I am enabled to give a most liberal warranty on all my implements, knowing that they can not but work as represented. I have just received the first premium at the NEW-YORK STATE FAIR, held here October 4th to 7th, for the best, most durable, useful and cheapest

AGRICULTURAL MACHINES

on exhibition. Orders will receive prompt attention, and Circulars sent gratis on application. Address

CHARLES E. PEASE.
Excelsior Ag. Works,
Albany, N. Y.
Jan. 1 1860

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R. L. ALLEN
189 & 191 WATER ST. N.Y.
ALLEN'S PATENT.

ALLEN'S MOWING MACHINE.

This Machine has been for several years the leading Mower of the country. It has been oftener victorious in honest trials among intelligent farmers in the United States, than any other Mowing Machine. It has also become the leading Mower in

GREAT BRITAIN AND FRANCE.

In every contest there it has easily beaten all its competitors. The Emperor Napoleon has ordered four for his private farms, and other eminent Agriculturists in Europe have given it the preference over all others.

It is celebrated for it's light draft, perfection and rapidity of its work, simplicity, great strength and durability. A platform can be attached at the expence of $10, which makes it the best and most economical reaper in use.

Price $110, with full setts of extras, tools, &c.

Discount to Dealers. For sale by

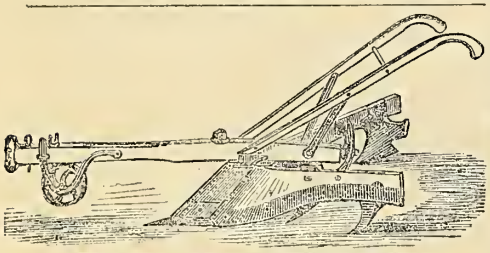
R. L. ALLEN, 191 Water-st., New-York.

AMALGAM BELLS.—Only one-third as much as Brass Composition, with tone and strength equal. Farm, School-houses, Shops, and Hotels supplied, 50 to 200 lb. Bells at $6 to $25 each. Churches, Academies, Fire Alarm Bells, 1700 lbs. $175; 825 lbs $100; 650 lbs. $75; 460 lbs $55; 300 lbs. $35; complete and warranted 12 months, with Yoke, Standard, Wheel and Tolling Clapper, and delivered at express offices, railroads, or steam boats.

M. C. CHADWICK & CO., 17 Spruce-st., New-York.

Sugar Evaporator.

Cook's Patent for converting Sorghum, Cane, and Maple juice into finely granulated sugar in 30 to 60 minutes. This is the only successful Sorghum evaporator yet invented, and it possesses decided advantages over other evaporating pans for either maple or cane juice. For sale at the Agricultural Warehouse of R. L. ALLEN, 191 Water-st., New-York.



Share's Patent Horse Hoe
AND
Hilling Machine.

A valuable, labor-saving Machine.
PRICE $10.

For circular with directions for using, address owners of Patent Right. TREDWELL & PELL, 45 Fulton-st., N. Y.

SHARE'S Patent COULTER HARROW.
SHARE'S PATENT PLANTER AND HOER.
SHARE'S PATENT HOER
For sale by R. L. ALLEN, 191 Water-st., N. Y.

PRUNING SHEARS.—The best article for Pruning Vines, Rose and Gooseberry Bushes, and in fact all kinds of Pruning—will cut a limb, ¾ inch in diameter, with clean cut. Made and sold at wholesale and retail by

JOHN ROWE, 269 Pearl-st., New-York.

RUSSIA OR BASS MATS, SELECTED expressly for budding and tying, GUNNY BAGS, TWINES, HAY ROPES &c., suitable for Nursery purposes, for sale in lots to suit by D. W. MANWARING, Importer,
248 Front Street, New York.

New Onion Hoe.

This implement has been tested by extensive onion growers, who recommend it highly. It is of simple construction, easily worked, and enables one man to do the work of four with the common hoe. It can be used in the cultivation of other vegetables. For full particulars address

JOHN GUYER, Westport, Conn.

Metropolitan Washing Machine.

Can be worked by a child—will save its cost by the wear and tear of clothes in a short time. After using three times you would not part with it for three times its cost.

For sale by

R. L. ALLEN, 191 Water-st., New-York.

HAY—HAY—HAY.

INGERSOLL'S IMPROVED PORTABLE HAY PRESS, for packing *Hay, Cotton, Rags, Hemp, Broom Corn*, &c., &c., 700 of these machines having been sold during the last three years, letters from every State in the Union testify to their *superiority, convenience* and *economy*.

Price. *Hay Press No.* 1, $50; wt. of bale 150 to 200 lbs. No. 2 $75; wt. of bale 250 to 300 lbs. Cotton Press, $150. Any sizes and for any purpose of packing, made to order and delivered on shipboard in New-York. Address for Circulars or Machines FARMERS MANUF'G CO., Greenpoint, Kings Co., N. Y.

WETHERSFIELD SEED SOWER.—Described in March number of Agriculturist. Price $6. For sale by R. L. ALLEN, 191 Water st., New-York.

Attention, Farmers!

From the unparalleled success of the Ketchum Machine the past season, I am induced to build for the harvest of 1860 a LARGER NUMBER THAN USUAL, and I offer them as the most perfect Machine I have ever manufactured, and at prices to correspond with the times.

HOWARD'S NEW TWO HORSE MOWER—all Iron, light draft, no side draft, no driving fast to have them work well, no clogging. Price only $100.

HOWARD'S NEW ONE-HORSE MOWER, is of light draft for one horse, and capable of cutting six to eight acres of any kind of grass per day. Price $75.

Wood Frame Mowers, Two-Horse, Price $80.

Combined Mower and Reaper (Iron, with late improvements), took first premium at the United States Fair at Chicago last Fall, price $130.

All the above Machines have Emery's adjustable Lever and Roller, and various other improvements, and are warranted.

Send for Pamphlets. Address

R. L. HOWARD, Buffalo, N. Y.

AGRICULTURAL AND HORTICULTURAL IMPLEMENTS, the latest improved.
FIELD and GARDEN SEEDS, from the most reliable growers, warranted pure.
No. 1 PERUVIAN GUANO.
SUPERPHOSPHATE OF LIME.
BLOOD AND WOOL MANURE.
BONE DUST, LAND PLASTER,
POUDRETTE, &c.
Sold by GRIFFING, BROTHER & CO.,
60 Cortlandt-st., New York.

NEW-YORK AGRICULTURAL IMPLEMENT,
Machine, and Seed Warehouse.
R. L. Allen, 191 Water-st., N. Y.

The attention of Farmers, Merchants, and all interested, is invited to my large and unequaled assortment of Agricultural and Horticultural Implements and Machines.—The greatest care in the selection of articles I offer for sale, to have them of the best and most approved patterns, and that they be made in the most substantial manner.

I particularly call attention to my superior Burr Stone and Iron Grain Mills, Horse-Powers, Threshers, Mowing and Reaping Machines, Saw Mills, Corn Shellers, Hay, Fodder, and Stalk Cutters, Presses, Pumps, Brick Machines, Carts and Wagons, Cotton Sweeps, Cultivators, Harrows, Plows of every variety, Garden Tools, &c.

FERTILIZERS—Peruvian Guano, Bone Dust, Phosphate of Lime, Dried Blood and Wool, Plaster, &c.

Orders solicited for the above, and for STEAM ENGINES and MACHINERY OF ALL KINDS, which shall receive prompt attention, and be filled on our best terms.

BURNELL'S PATENT ROTARY LIFT AND FORCE PUMP.

Adapted to DEEP WELLS, CISTERNS, HOUSE and FARM purposes, GREEN-HOUSES, etc. Its peculiar arrangement avoids the necessity of using Leather or India-rubber Valves, Packing, Springs, and other delicate parts, liable to become disarranged, or to require adjustment or renewal, hence it is the most desirable, and in the end the cheapest Pump for all Domestic and Farm purposes, yet produced.

Principal Sales Depot at 23 Platt-st., New-York.

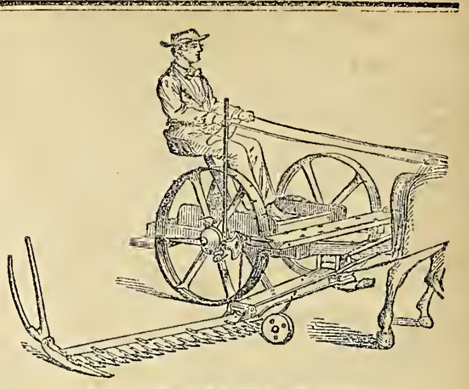
SAM'L B. LEACH.

THE EXCELSIOR NON-SWARMING BEE-HIVE, with Movable Section-Frames and Comb Guide, Pat. Nov. 9, 1858. Just the arrangement long needed. No trouble with watching and hiving swarms, requires less attention, and a far greater amount of honey obtained, than from swarming hives. And by means of the small frames and "comb guide," the honey is obtained in the most convenient and beautiful form for family or market use. If desired, the hive is readily converted into two swarming hives, or the colony may be divided.

I am also manufacturing an improved dividing, or swarming hive, with either the small frame arrangement, or with glass honey boxes, as purchasers may prefer. This is a convenient, simple, and practical hive.

N. B. The small frame arrangement can be used on any hive the common honey box is used. Taking these improvements together, they are believed to be the most practical and perfect of any yet devised. Hives and Rights for sale at moderate prices. Circulars sent to all who forward a one-cent stamp. Address

E. W. PHELPS, Patentee, Elizabeth, N. J.



AS IT APPEARS IN THE FIELD.

Buckeye Premium Mower,
WITH FLEXIBLE FOLDING BAR.

The farmer intending to purchase a Mower will find it to his advantage to examine the Buckeye for 1860, which combines all those features which have given it its present reputation, that of

THE BEST MOWING MACHINE IN THE WORLD,

together with several important improvements added the present season.

The Machine is supported on two driving wheels, which act together or separately, keeping the knives in motion in turning either to the right or left. The Cutter Bar is attached to the frame by a double Hinge Joint, which allows either end to rise or fall independent of the other, adapting itself to all inequalities of the surface, and also adding greatly to the strength of the Machine.

When not in use, the cutters can be instantly folded over the front of the frame, rendering the Machine as portable as a common cart.

The DOUBLE JOINTED FLEXIBLE BAR belongs exclusively to the Buckeye Mower, and is secured by the patents of SYLLA & ADAMS, and AULTMAN & MILLER, which patents will be fully sustained against all infringements.

One of the strongest proofs of the success of the principles of the Buckeye is to be found in the fact that, since its introduction, numerous other machine manufacturers have changed the construction of their own Machines, and introduced features in IMITATION of the BUCKEYE.

Orders must be sent early to secure Machines. My unfilled orders of the last season amounted to several hundred.

JOHN P. ADRIANCE, Manufacturer and Proprietor,
Po'keepsie, N. Y., and Worcester, Mass.,
Warehouse, 165 Greenwich-st., New-York.

ALLEN'S REAPING & MOWING MACHINE.

NO REEL REQUIRED, as it will work perfectly without, thus saving the additional cost.

This is the LIGHTEST DRAFT.
The most SIMPLE IN CONSTRUCTION.
The LEAST LIABLE TO GET OUT OF ORDER
The MOST ECONOMICAL machine ever made, and

WARRANTED TO GIVE ENTIRE SATISFACTION

Price $120 with full setts of extras, tools, &c.
A liberal discount to dealers.

R. L. ALLEN, 191 Water-st., New-York.

Also a COMBINED MOWER AND REAPER with reel—

Iron driving wheel	$130
With large wooden driving wheel	135
Large six feet reaper and four feet driving wheel	150

THE DEEP BREAKING UP PLOW.

This Plow turns a furrow TWO FEET DEEP and of corresponding width.

When desired, the furrow can be deepened another foot with my new subsoil Trench Plow, thus turning up the soil *Three Feet deep.*

It is the *most suitable* Plow ever used for preparing the ground for Vineyards and Nurseries, or for any other crop requiring an extra deep tilth. It pulverizes the soil better, and leaves the ground in a finer condition than can be done by the spade, and at about *one-fourth the expense*—thus making it a great labor-saving machine.

THE SUBSOIL TRENCH PLOW

Penetrates the soil from one to three feet deep as required.

THE DRAIN PLOW

For opening deep ditches for Tile or other drains.

THE ROCK PLOW

Turns out large stones or small rocks from either the surface or subsoil.

DEEP TILLERS.

These Plows are made to run from 12 to 20 inches deep as required.

THE GIBB'S PATENT CYLINDER PLOW

Is celebrated for its ease of draft and the wide furrow it turns.

POLISHED STEEL PLOWS

For Texas, California, and all other parts of the United States.

These are most suitable for clay and other adhesive soils, as they do not adhere to the mould board. They are light and strong, and of all sizes, from small one-horse to large four-horse.

All the above plows are new patterns, manufactured for this market exclusively by myself. They are remarkable for light draft and the perfection of their work.

In addition to the foregoing, I keep upwards of ONE HUNDRED AND FIFTY other kinds of Plows.

ALSO ALL OTHER AGRICULTURAL IMPLEMENTS.

HORTICULTURAL IMPLEMENTS—The largest and most complete assortment to be found in the United States.

FLOWER, FIELD, AND GARDEN SEEDS of all varieties.

GUANO, BONE DUST, POUDRETTE, and various other fertilizers.

R. L. ALLEN,
191 Water-st., New-York.

More Testimonials
IN FAVOR OF
PYLE'S SALERATUS.

The following legitimate TESTIMONIALS are brought before the public to show that wherever "JAMES PYLE'S DIETETIC SALERATUS" has a fair trial, it takes preference to all others. It is the most wholesome and economical Saleratus in use. All should be sure that their Grocer does not palm off some *other*, done up in a similar kind of pink paper, on which he can make a large profit. Those imitations are slow poison. The genuine has the name of "*James Pyle*" on each package.

DEPOT NO. 345 WASHINGTON ST., N. Y.

NEW-PHILADELPHIA, O., Oct. 5, 1859.—This is to certify that we have sold James Pyle's Dietetic Saleratus, and have always found that where it is once used, it is universally called for again, and we have no hesitation in recommending it as far superior to anything used or sold, bearing the name of Saleratus.
MORROW BROS.

We have sold Pyle's Dietetic Saleratus for some time, and those who buy it once, will buy no other. SAMM & KUHLE.
Hillsdale, Mich., Dec. 5, 1859.

I have sold the above mentioned article for the past year, and can recommend it as the purest and best of anything of the kind in use. J. MEYER.
Jonesville, Dec 6, 1859.

Having sold James Pyle's Dietetic Saleratus for the last eighteen months, I can say that it is universally liked by my customers, and I believe the only pure article in the market.
Burr Oak, Dec. 7, 1859. C. K. WARD, Agent.

We have sold James Pyle's Saleratus, and can say that we think it the best article in market. C. B. TAYLOR & SON,
Goshen, Dec. 12, 1859. W. B. TAYLOR.

We have sold James Pyle's Soda Saleratus for the last year, and find it the best article of Saleratus that we ever sold. When we sell it to a customer once, they invariably call for Pyle's Saleratus when they want more.
Jackson, Mich., Dec. 24, 1859 PENNY & VAUGHN.

We, the subscribers, have been and are now selling "James Pyle's Dietetic Saleratus" with much satisfaction to ourselves and customers. All that have tried it pronounce it the best they have ever used. The *actual consumers* are the best judges, and it is on their testimony, that we recommend it to all dealers who may want a reliable article.

HOLLISTER & OLMSTEAD, Hancock, N. Y.
GAYLORD CURTIS, Susquehanna Depot.
WHITNEY & PYNE, " "
THOS. INGETRUM & SON, " "
C. S BENNET, " "
D. & D. M. BAILEY, Lehaysville, Pa.
J. W. WOODBURN & Co., Rome, Pa.

From the Boston (Mass.) Post, Jan. 30, 1860.

Pyle's Saleratus is the best preparation for making bread and pastry digestible that ever was used. Every Housekeeper should have it, that every stomach may know the comfort of it.

From the New-England Farmer, Boston, April 4, 1857.

James Pyle's Dietetic Saleratus is attracting much attention among housekeepers for its qualities in producing light and healthy bread and biscuit. Those who have given it a trial, speak in high terms of its value in making good bread. Our readers will do well to try it.

SOMETHING NEW.
B. T. BABBITT'S
BEST MEDICINAL SALERATUS.

68 AND 70 — 68 AND 70

Is manufactured from common salt, and is prepared entirely different from other Saleratus. All the deleterious matter extracted in such a manner as to produce Bread, Biscuit, and all kinds of Cake, without containing a particle of Saleratus when the Bread or Cake is baked; thereby producing wholesome results. Every particle of Saleratus is turned to gas and passes through the Bread or Biscuit while baking; consequently nothing remains but common Salt, Water and Flour. You will readily perceive by the taste of this Saleratus, that it is entirely different from other Saleratus.

68 AND 70 — 68 AND 70

It is packed in one pound papers, each wrapper branded, "B. T. Babbitt's Best Medicinal Saleratus;" also, picture, twisted loaf of bread, with a glass of effervescing water on the top. When you purchase one paper you should preserve the wrapper, and be particular to get the next exactly like the first—brand as above.

68 AND 70 — 68 AND 70

Full directions for making Bread with this Saleratus and Sour Milk or Cream Tartar, will accompany each package; also, directions for making all kinds of Pastry; also, for making Soda Water and Seidlitz Powders.

MAKE YOUR OWN SOAP
WITH
B. T. BABBITT'S
PURE CONCENTRATED POTASH.

68 AND 70 — 68 AND 70

Warranted double the strength of ordinary Potash; put up in cans—1 lb., 2 lbs., 3 lbs., 6 lbs., and 12 lbs.—with full directions for making Hard and Soft Soap. Consumers will find this the cheapest Potash in market.

68 AND 70 — 68 AND 70

Manufactured and for sale by
B. T BABBITT,
Nos. 64, 66, 68, 70, 72 & 74 Washington-st., N.Y,
and No. 38 India-st , Boston.

KEEP YOUR FEET DRY.
A. BROWER'S PATENT COMPOSITION

makes Boots and Shoes and all leather impervious to water, will keep so; polish as well after as before, and last at least half as long again for using it; which everybody ought to have.

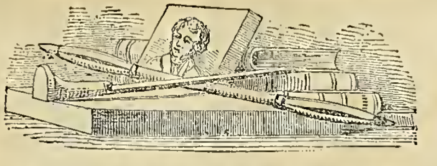
Sold in New-York by:

Claflin, Mellen & Co.; Cary, Howard, Sanger & Co.; Wells & Christie; Ellis Bro & Co; Wessen & Co.; Wessen, Watter & Co.; Wm. Bryce & Co.; Norton Jewett & Co; Harmor, Hays & Co; S. R. Van Duzer & Co.; Prinehot, Bruen & Seabury; Walsh, Coulter & Co.; Chapman, Lyon & Noyes; Blivin & Mead; Lathrop, Ludington & Co.; C. W. & J. T. Moore & Co.; J. H. Ransom & Co; Benedict, Hall & Co.; A. B. Sands & Co; Floyd Clarkman; Gradon McCready & Co.; Harral, Risley & Kitchin; Cook, Dowd, Baker & Co.; Gasherie & Davies; Porogo, Bulkey & Plimpton; Freeland Symes & Co., and by all Boot and Shoe, Hardware, Druggists, Groceries, and Yankee Notion Houses. Send your orders.

A. BROWER & CO., No. 4 Reade-st , New-York.

The Empire Dairyman.

Patented Feb. 1859, by REDINGTON & McCLURE, is manufactured by them at Fredonia, N. Y. It has taken the First Premium at all the State and County Fairs where it has been exhibited. It heats the milk uniformly with very little fuel—makes no steam. Supplies hot water in a reservoir attached, and makes the cheese uniform. For further information send for a circular.



DESIGNING AND ENGRAVING ON WOOD.

All who may desire to have designing or engraving done, will find it to their advantage to call on the subscriber, who is prepared to furnish on the most reasonable terms, and in the best style of the art, PORTRAITS, views of BUILDINGS, PLANS, &c., of Agricultural Implements, Horticultural and Scientific subjects of every description. THOMAS COX,
105 Nassau-st., corner of Ann-st., New-York.

Important to Housekeepers!
E. R. DURKEE & CO'S
SELECT SPICES.

In this age of adulterated and tasteless Spices, it is with confidence that we introduce to the attention of housekeepers these superior articles. We guarantee them not only

absolutely and perfectly pure,

but ground from fresh Spices, selected and cleaned by us expressly for the purpose, without reference to cost. They are beautifully packed in tinfoil, (lined with paper,) to prevent injury by keeping, and are full weight, while the ordinary ground Spices are almost invariably short. We warrant them, in point of richness and flavor,

beyond all comparison,

as a single trial will instantly prove.
Manufactured only by E. R. DURKEE & CO., New-York.
For sale by dealers in choice groceries generally.

IMPORTANT TO FAMILIES.
MAKE YOUR OWN SOAP.
"SAPONIFIER,"
THE READY FAMILY SOAP MAKER.

Cost of one pound Saponifier (in iron box)	25c.
4½ pounds of refuse kitchen grease, boiled about four hours, with the Saponifier, which would ordinarily be thrown away, or sold at one cent per pound, say	20c.
	45c.

Forty-five cents, therefore, is the whole cost of fifteen gallons of very superior soft soap, a perfect jelly.

TRY IT!!!

It will clean type to perfection, and where a strong lye is wanted for any purpose, it will be found valuable.

To be had of all respectable druggists and storekeepers.

BEWARE OF COUNTERFEITS.

The Original, Genuine, and Patented Article only made by
THE PENN'A SALT MANUFACTURING COMPANY.
Trade supplied and Circulars sent by addressing
LEWIS, JAMES & CO., Agents,
231 South Front-st., Philadelphia, Pa.

SAPONIFIER,
OR
CONCENTRATED POTASH.

A new article for making Soap, warranted to make Soap without Lime, and with but little trouble. One pound will make 12 gallons of good strong Soft Soap. Manufactured and put up in 1, 2, and 4 lb. cans, (in small lumps,) at the CHALLENGE CHEMICAL WORKS, New-York.
E. R. DURKEE & CO., Proprietors, 181 Pearl-st., N.Y

To Horse Owners.

WELLING'S WORM, DIURETIC AND CONDITION POWDERS, made after veterinary physicians' recipes, are very efficacious when given to horses suffering from inflammation of the lungs, heaves, worms, surfeit, moulting, or when hidebound. Testimonials from farmers, city railroad men, and other owners of horses, with directions for use, may be had on application to SAMUEL G. WELLING, Apothecary, New Rochelle, Westchester Co., N. Y. The trade supplied at $4 per dozen large boxes of 1 doz. doses each. Retail price 50c. per box.

FOR SALE TWO SUPERIOR BLACK HAWK STALLIONS, six and seven years old. Very stylish, fast, sound, kind, and sure foal getters, clear jet black.
ALFRED M. TREDWELL, Madison, Morris Co., N. J.

SUFFOLK SWINE.—The Subscribers have on hand and for sale pure blood Suffolk Pigs, bred from their own importations and descendants. Address
ISAAC STICKNEY, or } Boston, Mass.
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EXTRA PREMIUMS.

AN EXCELLENT CHANCE TO OBTAIN CHOICE SEEDS FOR THIS SPRING, WITHOUT EXPENSE.

[During the present month, as well as in past years, the friends of the *Agriculturist*, have greatly favored us in sending in the names of new subscribers, and we return them our hearty thanks. We shall hope for the continuance of these favors. But now that the active labors of the field and garden have commenced, and all are more or less occupied, we propose to make at least some return to those who will at this busy season take a little time and trouble, to talk over the merits of the *Agriculturist* with their friends and neighbors. We therefore offer the seed Premiums below. The seeds are all *pure, fresh*, and of the best kind. **N. B.**—Of course only one of these premiums will be paid on the same name, and it is necessary that every one applying should state which one of the premiums is desired.]

Premium 22.—To any person sending in *new* subscribers at $1 each, for the present volume of the *Agriculturist*, we will present as a premium for each *new* name, 15 parcels of seeds from the list below. If to be sent by mail, we will ourselves pay postage to the amount of *twelve cents*. If packages are chosen on which the postage exceeds 12 cents for the whole, the recipient will need to provide for the excess of postage. *We will give the* 15 *parcels of seeds and pay* 12 *cents of the postage for each name.* **N. B.**—If the new names are in clubs, new or old, and *at club prices*, we will give the 15 parcels of seed for each, but can not afford to pay the postage. [The new subscriber can also have the usual 5 parcels of seeds, on furnishing the stamped envelopes.]

SEEDS STILL ON HAND FOR PREMIUM 22.

[For descriptive notes, see pages 3 and 4 of January *Agriculturist*.]

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2—Improved King Philip Corn—Single, double, or triple packages, as may be desired, requiring one, two, or three 3-cent stamps.
3—Stowell's Sweet Corn—Same packages as No. 2.
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98—Long Red Mangold Wurtzel—One 3-cent stamp.
101—Improved Long Orange Carrot—⅓ of a 3-cent stamp.

Vegetable or Garden Seeds.

8—Daniel O'Rourke Pea—Packages same as No. 2.
9—Champion of England Pea—One 3-cent stamp.
99—Prince Albert Pea— do. do.
57—Eugenie Pea— do. do.
58—Napoleon Pea— do. do.
12—Green Kohl Rabi—One-third of a 3-cent stamp.
13—Enfield Market Cabbage— do. do.
15—Mammoth Cabbage Lettuce— do. do.
100—Early Purple Cape Broccoli—do. do.
95—Hubbard Squash— do. do.
109—Mammoth Red Tomato— do. do.
72—Imported Brussels Sprouts— do. do.
76—Musk Melon— do. do.
77—Water Melon— do. do.
103—Sage— do. do.
104—Thyme— do. do.
105—Chili Red Pepper— do. do.
106—Sweet Marjoram— do. do.
17—Red Strap-Leaf Turnip—One-half of a 3-cent stamp.
74—Solid White Celery— do. do.
75—Green Curled Endive— do. do.
71—Long White French Turnip—One 3-cent stamp.
107—Giant Asparagus— do. do.

Flower, Fruit, and Ornamental Seeds.

89—Cotton Plant (2 kinds)—One 3-cent stamp.
90—Norway Spruce Seed—One-half of a 3-cent stamp.
91—Arbor Vitæ Seed— do. do.
111—Castor Oil Bean— do. do.
110—New-Rochelle Blackberry—⅓ of a 3-cent stamp.

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27—Extra Cockscomb.
30—Tassel Flower.
31—Chinese Pink.
33—Cypress Vine.
34—China Asters, mixed.
35—German Asters, mixed.
38—Sweet William.
42—Foxglove.
47—Morning Glory, mixed.
49—Candytuft.
50—Schizanthus.
78—Ageratum Mexicanum.
80—Yellow Hawkweed.
84—African Marigold.
85—Gaillardia, mixed.
87—Coreopsis.
114—Mixed Petunia.
115—Mix. Dbl. Hollyhocks
116—Mourning Bride.
118—Bee Larkspur.
121—Trumpet Creeper.
122—M'd Canterbury Bells
123—Gilia nivalis.
124—Whitlavia.
126—Centranthus.

Premium 23.—To any person now sending a *new* subscriber, we will present a package containing from **400** to **500** seeds of the **New Rochelle Blackberry**, with instructions for cultivating. The seed will be sent post-paid by us. This will be a valuable premium, in localities where it is not practicable to obtain the plants. We have obtained a fine supply of pure fresh seed, at large cost. We are not aware that there is any other pure seed in the country.

Premium 24.—To any person now sending in a *new* subscriber we will present a *post-paid* parcel containing over **2000** seeds of the No. 140, *Dwarf Broom Corn*, described on page 104,

Premium 25.—We have a limited supply of seeds of some new and promising plants, recently forwarded to us by our agents in Europe. These we are putting up in papers, and making up parcels *containing one paper of each kind.* One of these parcels will be presented *post-paid* to any person now sending in a new subscriber and $1. As these seeds are new, we can not of course say what may be their value, but some of them will undoubtedly prove valuable, and those who get them now, will produce the first seed raised in this country. There will be in *each* parcel some of the following seeds:

127—New Red Turnip Beet.
128—Perfection Cabbage, described, "fine, early, large."
129—Waite's Improved Flat Dutch Cabbage, described as "not so large as the old variety, but more adapted for domestic purposes."
130—Great Eastern Pea.
131—Custard Marrow Squash.
132—Moss Curled Parsley.
133—Blackstone's Hybrid Turnip.
134—Shepherd's Hardy Early Cauliflower.
135—New Pink Celery.
136—Dwarf Crimson Nasturtium.

Additional papers of two or three other varieties of new seeds will be added to each parcel of the above. We have a variety to select from, but not enough of any one kind to say what extra sorts will be sent to any individual.

Premium 26—For Amateurs.—By special favor, and at large expense, we have obtained a small quantity of the seed of three hardy annuals which are now creating some interest in England, viz.: No. 137. *Clarkia pulcherrima*; No. 138. *Schizanthus grandiflorus oculatus*, and No. 139. *Heliophila cærulea stricta*. Those who have access to the English illustrated Horticultural Magazines probably know the beauty of these plants. A *small* parcel of each of these seeds will be presented post-paid to the first thirty or forty persons sending us a new subscriber at $1 a year.

American Agriculturist.

(DISTINCT ENGLISH AND GERMAN EDITIONS.)

A THOROUGH GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; IN-DOOR and OUT DOOR work around the DWELLING; care of DOMESTIC ANIMALS &c &c.

A full CALENDAR OF OPERATIONS for the season is given every month.

☞ The matter of each number will be prepared mainly with reference to the month of issue, and the paper will be promptly and regularly mailed before its date.

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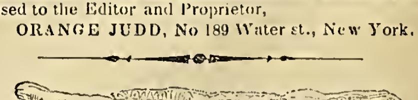

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ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE.
SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 6. NEW-YORK, JUNE, 1860. [NEW SERIES—No. 161.

☞**Office at 189 Water-st.,** (Near Fulton-st.)
☞**Contents, Terms, &c., on pages 189-92.**

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American Agriculturist in German.

The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs.

June.

"Whether we look, or whether we listen,
We hear life murmur or see it glisten;
Every clod feels a stir of might,
An instinct within it, that reaches and towers,
And, grasping blindly above it for light,
Climbs to a soul in grass and flowers."—LOWELL.

Growth is the phenomenon that meets us every where in this glorious month. All the pent up forces of the vegetable world break out into their highest activity in June. Trees make more wood in these few brief weeks than in all the rest of the year. The dormant Winter, and the hesitating Spring have passed, and Summer, in all its fresh and glowing life, is every where visible. Every blade of grass, every leaf upon tree and shrub, answers at once to the quickening influence of the sun.

"The vegetable world is also thine,
Parent of Seasons! who the pomp precede
That waits thy throne, as through thy vast domain
Annual, along the bright ecliptic road,
In world rejoicing state, it moves sublime.
Meantime the expecting nations, circled gay
With all the various tribes of foodful earth,
Implore thy bounty, or send grateful up
A common hymn; while round thy beaming car,
High seen, the seasons lead, in sprightly dance
Harmonious knit, the rosy fingered Hours,
The Zephyrs floating loose, the timely Rains
Of bloom ethereal, the light-footed Dews,
And softened into joy the surly Storms.
These in successive turn, with lavish hand
Shower every beauty, every fragrance shower,
Herbs, flowers, and fruits; till kindling at the touch,
From land to land is flushed the vernal year."

What is this strange mysterious principle that we see every where in the blooming Summer? It has been vigorously at work transforming the face of the world, yea building islands in the depths of the sea these thousands of years, always the study and the wonder of man, and yet as much hidden from his knowledge, as when the first human pair looked out upon the finished Creation. The principle of life has wrought such changes in the earth, that Adam would hardly know the dominion over which he was installed as lord. Almost every particle of the surface of the world visible to us, has been at some time within the organized body of some living plant or animal. It has felt the power of this principle, and been separated by it, perhaps into its ultimate atoms. We gather a handful of the black vegetable mold at our feet. It is now inert, but how many changes have passed upon it, in the last six thousand years! Had we the power of evoking from it the history of these changes, it would make one of the most interesting and instructive volumes ever written. The most of it is from the decay of plants, the carbon of which once floated in the atmosphere as a gas carried in every direction by the winds, until taken up by the leaves of plants. How many voyages round the world were completed by these particles? A portion of it is made up of minerals. Here are minute fragments of mica, feldspar, and quartz, too small for the eye to distinguish, traces of potash, soda, chlorine, alkalies and acids, only detected by the most delicate chemical tests. What rocks did they once enter into, what animal forms have they been incorporated with, and whence have they been borne in the earth's changes to their present resting place? Once, possibly, this particle dwelt in a granite boulder, and was borne from the remote North in the ice period and deposited in its present neighborhood. The lichens and mosses, pioneers among the vegetable workers, fastened upon the surface of the bare rock and drew aliment from its reluctant bosom. This particle then first entered into a vegetable form, and after a brief life and early decay, was detached from the rock by frosts and rains, and washed down to the soil. Its next adventure was among the grasses, taken up by the minute rootlets that feed their multitudinous growth. "The grass withereth, and the flower fadeth." In a single season it returns back to dust, and becomes plant-food. Again it passes into the circulation of a shrub, and sporting for a few hours in its tender shoots, is cropped by the grazing deer, and for the first time comes under the power of animal life.

The deer lives out his appointed days, and his carcass falls a prey to the fowls of the air. The particle that once culminated in the shrub, and flew swiftly on the winged feet of the deer, now flies more swiftly upon the strong pinions of the vulture. The bird of prey in his time dies, and our errant particle again fattens the soil, preparatory to entering into new combinations and organized forms. Here, in this handful of earth, we have not unlikely the stranded wrecks, or portions of them, of thousands of once living forms. It has been disintegrated from the solid rock, nurtured the life of the lowly mosses, luxuriated in the grass, flourished in the shrub, nurtured the beast of the field, and the fowl of the air, burrowed with the mole, and soared with the eagle. Thus the wonder working principle of life has sported with all that outer crust of the earth that we call the soil. We see its fairy creations, the verdant meadow, the waving fields of grain, the plumed spikes of grass, the tasseled corn, the nodding lily, and the blushing rose, in the vegetable world, and we admire its handywork in the nobler forms of animals, the sturdy ox, the graceful horse, the beasts of the field, and the fowls of the air.

And here we come again, in the opening Summer, into closest contact with this mysterious principle; the heavens above us, the earth around us, and the waters under the earth are full of it, yet no man is able to define it. Life is so fresh in field and forest that there is no visible sign of decay. Yet all the hopes of the husbandman are wrapped up in this strange thing we call life. Without it, his fields are barren, and his costly acres unproductive property. With it, he has more than the power of the fabled Midas, turning what he will into gold. On every acre he may open a mine, quite as productive as the placers of our Pacific shore. How few of those have yielded a hundred dollars to the acre; yet this is no uncommon feat of husbandry in the least favored of our States. He may not be able to sow dragon's teeth, and see armed men rise up from the soil to desolate the earth, but he can do a greater deed. He can stamp on the ground, and see lowing herds, white fleeced flocks, and neighing steeds rise at his bidding, animals more perfect in form, more profitable in their yield of milk, wool, and labor, than any the nations of antiquity ever saw. The deed is none the less wonderful, because it is not instantaneously performed. The ages of fable have passed, only to be outdone in these days of fact. The dreams of poets and the speculations of philosophers are more than realized in the achievements of modern husbandry.

Though we know little of life, we do know something of its laws and the conditions of its development. These are open for our study, and the knowledge of these principles that foster the growth of plants and animals, makes the successful farmer. Every season has its facilities for this study, but none is so important as these young fresh days of Summer. Now we are enabled to test our own theories, and the wisdom of our practice, as we see life bringing out the results of our labors. The new fertilizer is put into Nature's laboratory, and the report which vegetable life makes of its qualities must be considered final, whatever becomes of the theories and reports of the chemists. The new crop, or the new method in cultivation must abide the same test. It is by close observation, studying the phenomena of vegetable growth around us, that we shall become better cultivators and make husbandry more profitable. The practical results already realized by the application of *mind* to agriculture give the highest encouragement for further research. There are secrets yet locked up in the soil, which discovered, will enable us to double the certainty and the measure of reward for labor; and every fact carefully noted, opens the pathway to their attainment.

Calendar of Operations for June, 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

Explanations.—*f* indicates the *first*; *m* the *middle*; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

The hoe and the cultivator would be appropriate emblems of the work for the farm this month. Vegetation now pushes forward with rapid growth. Not only are the staple crops taking firmer hold of the soil, and expanding with cheering promise, but ragweed, daisy, dock, thistles, and a numerous horde of foul weeds also feel the quickening sunshine, and send out their hardy roots to rob the field and vex the husbandman. These are to be subdued; and, scarcely less important, the soil needs frequent stirring, to keep it in right mechanical condition. The roots of plants require air and water. If the surface become crusted; evaporation is obstructed, the moisture from the deeper layer of the soil does not rise freely, and the air and dews can not readily enter from above. The organic matter decomposes but slowly under such circumstances, the plants are stinted for nourishment, and their growth is checked. Hoeing by hand or by horse power, is the remedy for weeds and for a hide-bound soil. There may also yet be vacant spots to replant with corn, or to fill with other seasonable crops. He who has a mind to work, will now find enough to employ him.

Barley usually succeeds best sown early, but may still be put in, ff. It prefers a gravely soil, which should be deeply worked, and free from weeds. It may well follow a hoed crop. Sow from two and a half to three bushels per acre, and harrow in thoroughly.

Barns and Sheds—See that they are in order before the busy haying season comes on. Arrange the bay-way platforms to keep the hay from the ground and allow ventilation. If hay has spoiled, remove it to the manure heap. Examine grain bins, wool closets, and cattle stalls, for vermin, and cleanse if necessary.

Beans—Plant, ff, where corn has failed, if seed of King Philip or other early variety of corn can not be obtained

Bees—Read full directions under "Apiary" on another page. Be cautious in adopting "patent" hives; many of these *traps* puzzle the bees sadly. It will be time enough to procure Italian bees when they have been thoroughly tried by those who can afford to experiment with them. It is possible to be *stung* by handling them too freely while held at the present high prices.

Beets—Sow Mangel Wurzel and Sugar varieties, ff, m. Read "Hints on Root crops," page 175.

Boys will be ambitious to do men's work. Do not allow them to exceed their strength. Give them good tools, allow them frequent rests, and remember "All work and no play, makes Jack a dull boy." Make farm life attractive if you would have them remain in the business.

Buckwheat yields a quick return, and is an available crop for lands too wet for Spring plowing. It may also replace corn destroyed by worms or other casualties. It may be sown, ll, but the first or second week of July is preferable in this latitude, as it then has the cooler weather of September for filling. Make the soil fine and mellow, and use half a bushel to three pecks of seed per acre.

Butter—This is one of the very best dairying months, both for quantity and quality. The new growth of grass is plentiful and tender, and the cows if well cared for, have come up to full condition. Observe scrupulous cleanliness in every department. Keep the milk and cream at a temperature of from 62° to 65° Fahrenheit. *Let all butter be well worked.* See that the cows are milked rapidly, and perfectly dry. Let butter for market be put up neatly, and plainly marked with the owner's name. Read article on page 175.

Cabbages—Cultivate among the rows frequently—they can scarcely be hoed too much. Plant out for late crops, ml. They may be set between the rows of early potatoes which are to come off, ll, or the first of July. Good after culture will bring them forward in season, and thus two crops will be secured. Use plenty of stable manure, but none from the pig pen. Sprinkle the plants with air-slacked lime or leached ashes, to prevent green lice (aphides) and other vermin.

Carrots may still be sown, ff, for Winter use—they will pay as food for cattle or horses. Hoe and thin early, leaving them six inches distant in the row. Some extensive cultivators drill in carrots between the rows of onions, after the second or third hoeing of the latter. If this be done, leave every third space vacant, to give room for curing the onions when pulled.

Cheese—Read again the Prize Articles on the Dairy published in last Vol. Watch carefully those in the cheese room, to keep out flies.

Corn—King Philip or other quickly maturing varieties may be planted, ff, to replace failures or otherwise. Manuring in the hill will give it a rapid start. Thorough culture should be given to the growing crops this month, to subdue grass and weeds before the corn roots have extended far from the hill, when later plowing and hoeing would injure them. Leave the surface nearly level. Allow not more than four stalks to a hill—many successful growers leave but three. If the pasture ground is limited, put in a good quantity of corn broadcast or in drills, for feeding green. See article "Remedy for Short Pastures" page 175.

Fences—An occasional survey of all on the premises is necessary for the safety of the growing crops.

Grain Fields—Cockle, thistles and other weeds may now be seen plainly. Pass through the fields after rain while the ground is soft, and root them out. This should be done especially in the best parts of the field, from which seed for future sowing is to be selected. Winter grain will be ready for the reaper in some localities, ll. Cut it before fully ripe—when the berry is advanced enough to bear moderate pressure of the thumb nail without breaking, or just after it leaves the "milk" stage. The weight will be greater, and the flour better than from grain ripe enough to shell.

Haying should commence as soon as the seed begins to form on grass, or clover, that is just as the bloom passes away. After this, part of the nourishing matters of the stalk change to woody fiber. Hay, especially clover, cured without much exposure to the sun, will be sweeter. Put it up in narrow cocks, and provide hay caps for protection from rain. A farmer having much meadow, who has no mowing machine, is behind the times. The horse pitchfork will also expedite the work.

Hoeing will be the main work of the month, on many farms, as already noted. Use horse power where the ground will admit of it.

Manures—Roadside weeds, and sods from waste corners will add much to the manure heap, if properly prepared. Keep a supply in the pig pen, and also in the cow yard. They will absorb and save the liquid excrements, and wash from the droppings. If an animal die, turn it to account, by covering with a mound of muck or loam.

Millet—Sow, ff, m, if not done previously. It will afford a supply of green fodder, or add to the store of Winter feed.

Peas fed green with the straw, or ripened and ground, are considered excellent food for swine. They will at least afford a change relished by the animals. They may still be planted, ff.

Potatoes—Keep free from weeds, but leave the roots undisturbed by the plow after blooming. Hill them up only moderately if at all.

Poultry—Allow them to range, if no injury is done to the garden or growing crops. Collect the eggs regularly. Fowls will lay more freely if allowed a little grain daily. Break up the nests of those that show an inclination to set; the chickens will in most localities be too late for profit. If they are confined to the poultry house or yard, give them plenty of green food to peck at, or allow them to ramble an hour before going to roost. Keep their apartments clean, and use the droppings mixed with plaster, in the garden.

Pumpkins—Put in vacant spots, ff, they will have a chance for ripening, though somewhat late.

Sheep—Wash and shear, ff, if not already done. Read article on page 170. Ewes and lambs will do better separated from wethers and from all other stock. Keep burdocks and thistles from the pastures. Examine lambs that have been docked or castrated, for maggots. If any are found, apply tar, or spirits turpentine. Have every sheep marked immediately after shearing. Lampblack wet with turpentine and mixed with oil, is a cheap and serviceable mixture. Give a special mark to ewes yielding the best fleeces, and reserve them for breeders. Sulphur fed with salt, will, it is said, expel ticks and other vermin. Guard against dogs by attaching a small bell to every tenth sheep.

Sorghum—Drill or sow broadcast, ff, for cutting and feeding green. Cultivate that planted last month, the same as corn. If a crop is in cultivation for syrup, examine apparatus best adapted for grinding and evaporating. Much was lost last year by improper management.

Stock—Seek to improve by constantly selecting the best for raising, and by using none but good males.

Swine—Keep them out of the highway. Every farm should, if practicable, have an enclosure with running water, for their use. Allow them the range of the orchard to devour grubs and fruit infested with worms. If kept confined, give them plenty of green food, with sods, muck, leaves, and straw, to amuse themselves in rooting and manufacturing manure. Have no more than can be kept growing. Mix ground feed with wash from the dairy, and allow it to ferment before using.

Tanner's Bark—Peel from hemlock and oak, m, ll, and stand it up so as to afford protection from rain and allow to dry rapidly.

Tools, particularly for haying and harvesting, should all be put in readiness. A poor implement wastes the strength, does poor work, and is a constant discouragement.

Turnips do better sown next month.

Weeds—Nip them *before* they bud. A day's work in subduing them now, will accomplish more than double that time spent after weeds have become established, besides the better chance afforded to the growing plants.

Orchard and Nursery.

Cultivating is the main work of the month in these departments. The same conditions of soil which promote the growth of corn and potatoes are favorable to the production of vigorous trees and perfect fruit. Many orchards which now bear only in alternate years, would, if properly treated, yield a full crop yearly. A heavy sod, or an exhausting burden of grain will not allow free growth of the orchard. Root crops are less injurious, as the manuring and hoeing will be of partial benefit to the trees.

Fruit culturists have special interest in the preservation of birds. As forests diminish, insects make their way to the orchard, and are kept in check with extreme difficulty, unless the birds are permitted to pursue them unmolested. Encourage the robin, the sparrow, the wren and other feathered friends to make their homes in the orchard.

Budding is better done next month in this latitude; at the South it may be commenced, ll. Remove suckers from trees budded last year, and keep the growing buds tied up, to prevent their being broken off by their own weight, or the wind.

Caterpillars if left unmolested until now, are plainly visible; their nests disfigure the trees, and their depredations on the leaves are serious. Destroy them at once

Evergreens already planted, will receive much benefit from mulching, particularly if the weather be dry. They may still be safely transplanted, ff. Observe the precautions noted last month. Read pages 178 and 179.

Fruit injured by insects, falls easily from the tree, and should be gathered and fed to swine, or destroyed, to prevent multiplication of the young vermin. Allow swine the range of the orchard and fruit yard. Thin out fruit that has set too thickly. If very fine specimens of any sort are desired, leave but few to be ripened. Protect choice cherries from birds by netting or gauze spread over the branches. The occupants of a wren house set in or near a fruit tree, will aid in keeping away strange birds.

Grafts—Examine and loosen any bandages cutting into newly grafted trees. Replace cement or grafting wax that has cracked or peeled off. Remove suckers.

Hoeing—The plow, horse-hoe, or cultivator will almost entirely do away with work by hand in the nursery rows and the orchard. Avoid barking the trunks of trees by passing too closely with the plow. Use the hand hoe to remove grass and weeds immediately about the trees.

Inarching or grafting by approach, as described last month, will be in season.

Insects—Read "Insects and Fruits" in this paper, and follow suggestions.

Layer, ll, new growth of deciduous and evergreen trees. It was fully described and illustrated last month.

Manure should be spread on the surface as far as the roots extend. Give a generous quantity of well decomposed muck, or composted barn yard manure, to be manufactured into good fruit.

Mulching is beneficial on open soils, especially for newly planted trees, and in a drouth. Cover the whole ground or as far as the roots spread, with half an inch of short straw, tan bark, or other suitable material.

Pruning—Leave it mostly, except for evergreens, until next month. The shoots of bearing trees may be pinched back to induce fruit buds, or to ensure a good shaped head.

Scale—The young are now exposed, and may be easily removed by scrubbing with strong soap suds or potash and water. Strong lye will answer. A tree can not thrive where they are present, and they spread rapidly.

Seedlings, especially evergreens, will require shading from very powerful sunshine. Give water at night occasionally if there be drouth.

Water newly planted trees, if very dry, and mulch, to retain the moisture and prevent the surface from crusting.

Weeds should not be allowed a place in either nursery or orchard.

Kitchen and Fruit Garden.

The properly cultivated garden is now yielding its first products. Early greens, asparagus, rhubarb, lettuce and radishes, etc., have added to the attractions of the table; strawberries give promise of an early treat, and the rapidly growing vegetables and fruits that fill a well assorted collection, will keep up the pleasant succession throughout the season.

In the necessary labors of hoeing, weeding, bug trapping, etc., the boys of the family may well receive their first practical lessons in soil culture. They will be proud to exhibit the results of their efforts if they are entrusted with responsibility in some of the simpler departments, and encouraged by judicious praise. A fine bed of carrots or beets will be their certificate of industry and painstaking, a large melon will equal a medal; thus the right growth of the household will keep pace with growth in the garden.

Asparagus—Keep all weeds down, and the surface loosened by frequent hoeing. Do not continue the cutting later than the tenth of the month; late cropping injures the bed.

Beans—Train running varieties to poles or trellises. Do not hoe when wet, avoid throwing earth upon the leaves. Early Kidneys and Limas may still be planted, ff.

Beets—Put in, ff, all not sown for Summer use, and, m, l, for Autumn and Winter crops. If the ground become crusted after sowing, water the rows at night, to allow the young plants to push their way through. Hoe and weed as soon as the rows can be distinguished. Thin out early. The young plants are excellent "greens." Continue to thin as they advance in growth, leaving them finally six to eight inches distant in the row.

Blackberries and Raspberries—Keep all properly secured to stakes and trellises, and train the new growth as it advances. If specimens of extra large fruit are desired, thin bunches already set, leaving but few in the cluster.

Borecole, Brussels Sprouts, Broccoli, Kale, etc —Transplant for late crops, f, m.

Cabbage and Cauliflower—Sow seed, ff, for latest transplanting. Set out, f, m, for Autumn, and, ll, for Winter use. Frequent and thorough hoeing will induce rapid growth. The cut worm and other insects must be watched and destroyed. Replace stunted plants, or those eaten off by vermin.

Carrots will succeed well if sown, ff, though last month was more favorable. Destroy weeds before they become troublesome. Thin early to six inches apart in the rows. If left too long, they run up spindling, and fall and are checked in growth when thinned.

Celery—Set plants for the general crop, in trenches, m, l, watering and shading as long as needed to prevent wilting. Some gardeners prefer setting their celery plants upon the surface, in deep rich soil, leaving it to attain a large growth of leaf, and then hilling it high, to blanch the stalks.

Corn—Continue to plant at intervals of ten to twelve days, to prolong the season of supplies for the table. Vacant spots or plots from which early vegetables are ready to be gathered, may be planted, to be cultivated after the first growth is removed.

Cress—Sow, f, m, l, for a constant supply.

Cucumbers, Melons and Squashes—Replant where destroyed by insects. Put in cucumbers for pickles, m, l. Examine early every morning for striped bug and other insects, and apply the thumb and finger remedy. See article "Death to the Bugs" in this number.

Currants—Pinch off suckers, and straggling shoots on those trained to a tree form, which is preferable. Examine leaves for the "Currant Aphis" described in April *Agriculturist*, page 109, and syringe with whale oil soap, or apply lime or ashes. Water the bushes with soap suds and other sink wash.

Egg Plants—Transplant, ff, for full crop, and, m, for later bearing. Set them where they may have the full benefit of the sunshine, and give frequent hoeings.

Fruit—Take off nearly or quite all from plants or trees set out the present season. The strength of the plant is needed to recover from the check caused by removing. Thin out clusters from over bearing trees or bushes. Protect from birds with netting. Bright pieces of tin suspended in trees or around the fruit plot, will frighten away many of the feathered plunderers.

Gooseberries—Keep down all weeds, and the surface around them well hoed. Mulch with tan bark, salt hay, or saw dust. Keeping the surface of the ground shaded and moist, aids in preventing mildew. Thin out the fruit to increase the size of the berries.

Grapes—Do not allow the rapidly growing vines to become a tangled mat of foliage. Remove all shoots that interfere with proper training. Where several push out at a single joint, leave only one or two. If more than two bunches of fruit set on a single spur, thin them out, one bunch alone will yield finer fruit. Pinch off the ends of the bearing branches at two or three buds beyond the last cluster. Examine carefully for insects, and apply the remedies recommended for other plants.

Insects—Read articles on subsequent pages.

Lettuce—Sow and plant out at intervals of a week to keep up a succession of young and tender leaves. Transplanting favors a compact growth of the head. Hoe after the dew is off, and avoid throwing dirt among the leaves.

Onions—Weed and hoe frequently. Thin to three or four inches in the row.

Parsneps and Salsafy—Hoe and thin, ff, m, the same as for beets and carrots.

Peas—Plant, ff. They are less troubled by the weevil or pea bug, than those put in earlier. Cover two or three inches deep. Keep well hoed. Supply with bushes or with stakes and twine for their support, before they fall to the earth or clasp each other with their tendrils.

Potatoes—Hoe and weed thoroughly. Dust freely with ashes or air slaked lime, to repel insects. Plant cabbages between the rows of the early varieties, to come on after the first crop is removed.

Radishes—Sow at intervals between rows of young carrots, beets, etc., among hills of cucumbers and melons, and other unoccupied corners.

Rhubarb—A full supply may be kept by pinching off the seed stalks as they appear. Keep the ground around them well loosened and free from weeds. A barrel with both heads out, set over a plant, will cause its leaf stalks to grow long and tender.

Spinach—Sow, f, m, for continued supplies. Turn under early crops, and replace with fresh sowings or other vegetables.

Strawberries are often injured by being beaten down by rains into the soil. Clean the bed from grass and weeds, and spread tan bark or cut straw between the rows, and under the plants. Read article "How to pick Strawberries" on page 181.

Thin out all plants, vegetables, and fruits that require it; there is no profit in crowding the ground.

Tomatoes—Transplant, f, m, for late use. Train them on trellises or frames as described last month. Shorten the branches after the blossoms appear, and keep them pruned, to prevent a bushy growth. The yield will be greater, and the fruit improved in size.

Transplanting can be performed with success upon any plant, if sufficient care be taken to keep the roots unbroken, and the soil loosened on the surface, after the plant is reset. In this way, missing hills of corn, beans, and even melons and cucumbers may be replaced. Choose cloudy or wet weather, or towards evening for the operation, and give shade if the sun be very powerful.

Turnips—Sow, ff, m, for Summer use. Those for Winter stores may be left until July. Dust the young plants with ashes or soot, to keep off insects. Thin out, and keep free from weeds.

Water plants lately removed, if the ground be dry. Open a hole near the plant, turn in the water, and replace dry earth. This will prevent crusting of the surface. Where this is not practicable, sprinkle from a watering pot, or garden syringe, at evening.

Weeds in the garden proclaim neglect by the gardener. Allow none to make a mark against your industry. Keep the hoe polished by destroying them.

Winter Cherry (*Physalis*)—Transplant from the seed bed, f, m. If plants are scarce, they may be multiplied by cutting off branches and setting them in good soil; they take root easily. Seed sown early may yet germinate. It sometimes lies dormant several weeks before vegetation.

Flower Garden and Lawn.

If properly arranged and well cared for, the Flower Garden, Lawn, and Shrubbery, are very attractive now. While enjoying the fragrance and beauty of the blooming plants, the fine deep green foliage and pleasing outline of the evergreens, the gracefully winding drive among flower borders, massing plants, stately trees, blooming shrubs, and the rich glossy lawn, one feels amply repaid for the labor bestowed upon this department of ornamental gardening, and, if favored with ample means, resolves upon still further improving and extending these grounds, alike the pride of the owner, and the delight of visitors.

The labors of re-arranging the old, or forming new grounds, planting trees and shrubs, sowing seeds, and otherwise preparing for a summer bloom, have been completed, and a brief rest may be taken. Not long, however, can the florist be idle, for a volunteer crop of weed and flowers not wanted, have already sprung up, and are striving for the mastery. They would soon entirely overrun the delicate flowers, if left unchecked. With hoe, rake, and weeding knife, the gardener must commence a war of extermination during this growing month. Nor is it sufficient to merely keep down weeds. The ground should be frequently stirred, or it will crust or bake upon the surface, shutting out air and dews from the roots, and turning away the rain which should penetrate the soil. A fine toothed rake is a good implement for lightening the surface, and at the same time disturbing the weed seeds about sending up their shoots. Besides keeping down the weeds, there are many plants to be removed or thrown away; it is impossible to have healthy foliage and a fine bloom in crowded grounds.

Some of the early flowering bulbs have finished blooming, and may now give place to other plants. It is not too late to sow many of the quick growing annuals, or those sown last month may be transplanted in their place.

Bedding Plants—Complete setting verbenas, geraniums, petunias, pansies, daisies, dicentras, etc., ff.

Box Edgings may still be set, ff, m. Trim or shear old borders, m, l, on damp or cloudy days. Keep well hoed, and replace any unsightly or defective plants with those of thrifty growth.

Bulbs—Lift, ll, those to be reset in the Fall. Dry them in the shade, and lay in drawers or wrap in papers, carefully labeling.

Carnations and other Pinks—Keep well tied up while in bloom. By shading with a muslin screen during midday, the flowering season may be much prolonged. Layer and make cuttings, f, m.

Climbers of all kinds should be kept well secured to stakes or trellises. If to be laid down in the Fall, do not allow them to twine in such a way that they can not be easily removed. They should be kept from passing and repassing through the meshes of wire or slat lattice work.

Dahlias—Plant out any remaining roots, ff, watering freely. Stake up those set last month, leaving, at most, but two shoots to a root—one is still better.

Evergreens may still be set out, ff, m. Remove them with earth about the roots, when practicable, and water freely at the time of setting. Those set last month, will do better if watered during dry weather.

Flower Stalks—Cut away as fast as they are out of bloom. They have an unsightly appearance when left in the flower border. They should give place to the later growing annuals.

Geraniums—Plant out, ff, any remaining in pots. They mass finely, either in distinct colors, or when mixed.

Gladioluses—Stake, ll, those put out last month.

Grass Edgings, or Borders—The grass is now growing rapidly, and needs frequent clipping and an occasional trimming or paring at the edges, to prevent its extending into the beds or paths.

Gravel Walks—Keep free from grass and weeds, raking and rolling frequently. Add fresh gravel to old paths.

Hedges—Clip, m, l, rapidly growing deciduous, and even evergreen hedges.

Hoes should not be idle during this growing month. Keep them in constant use, hoeing up weeds and loosening the soil.

House Plants—Green-house, hot-house, and parlor-plants have nearly all been transferred to these grounds, some of them for summer blooming, others to attain a flowering size by the time they are returned to the houses in the Fall. Some have been planted out, while others are plunged in the earth and should be lifted, pot and all, and turned so as to separate any roots extending through the hole at the bottom. Pinch back freely, to form fine bushy plants.

Insects are now providing for future broods. Forestall their operations by destroying the parent stock.

Lawn—Keep the grass in a fine thick mat by cutting often—at least every fortnight. See article upon cutting grass, on page 160. Do not allow grass or weeds to grow about the trunks of small trees, particularly those newly planted. A circle of from four to six feet in diameter, with the tree as a center, should be kept well hoed or raked over. Cut the turf smooth and even, in a true circle, and remove the earth around the edge for a few inches in depth, raising a slight mound about the trunk. To make it still more ornamental, a few verbenas, petunias, salvias, or other flowering plants, may be sparsely planted upon this mound. They will injure the tree far less than the closely matted roots of different grasses. If the grass has a weak, unhealthy appearance, give a top dressing of bone sawings, guano, or a sprinkling of liquid manure.

Roses are the pride of the flower garden in June. From the low growing Tea to the standard Bourbon, June, Pillar and Prairie Climber, red, pink, blush, lilac, yellow, and white roses, are in full flower, shedding both beauty and fragrance. If the border contain but a single specimen, let that be a Remontant rose. Bugs, slugs, and leaf hoppers will dispute with you their possession. The rose-bugs may be destroyed by shaking them into a shallow basin of hot water, or by hand picking. Whale-oil soap, dissolved at the rate of 1 pound to 3 gallons of water, will destroy both slugs and thrips. Pour it on from the rose of a watering pot, or use a hand-syringe with a sprinkler attached. In the absence of soap, each morning while the dew is on, dust with wood ashes, and the slimy green worm, which is eating out all the substance of the leaf, will soon disappear. A single application of either of the above remedies is not sufficient, as successive broods continue to hatch out.

Transplanting many of the early sown flowers is now in order. Select a cloudy day before a rain, if possible, and take up plenty of earth, carefully, with the roots, using the trowel, and the plant will receive very little check. If done in dry weather, water freely, both before and after the operation; the evening is the best time.

Verbenas and Petunias now make a fine show if a good collection was put out last month. They may still be planted, ff. By pegging down the verbena, a large mass or mat can be formed from a single plant.

Water trees and flowers recently transplanted, if the month prove dry. Nature's own showers are best, however, and a good stirring of the soil to help draw moisture from below, and retain that which falls upon the surface, will usually answer all purposes, except for transplanted shrubs, trees, and flowers, or for newly turfed edgings.

Green and Hot-Houses.

These have mainly been emptied of their plants, which now grace the flower borders. In extensive collections, the more tender plants are better managed in than out of the house, and on that account are still kept upon the shelves. They now require abundance of air and plenty of water. The upper ventilators should be kept open during fair weather. Opening both upper and lower would dry the atmosphere too rapidly. Look well to the pots which have been set in the yard with their contents undisturbed. See that they are shielded from high winds, and watered as needed

Azaleas are now making a rapid growth, and need abundance of water, and some pinching in.

Bud, m, l, oranges, lemons, citrons, shaddocks, etc.

Camellias do quite as well in the open border, to which they may be carried, ff. If retained on the shelves in the house, water and syringe often. Watch for and check the approach of insects. Cut back to a bushy well formed head.

Cuttings of Chrysanthemums, Myrtles, Hydrangeas, Fuchsias, Geraniums, etc, may be made and potted, f,m.

Geraniums are in full flower, and should be watered freely. Insert cuttings and make layers to increase the stock of desirable kinds.

Grapes—The early houses will now be ripening their fruit, and the syringing overhead must be omitted. Some of the later crops need a further thinning, while others, with little forcing, are only in flower. Pinch back bearing shoots to three leaves, at most, beyond the bunches, and rub off superfluous shoots. Air freely, and water as required.

Layer and Inarch woody and other plants which do not root readily from cuttings.

Potting—Many of the rapidly growing plants will now require more room, and should be transferred to pots of a larger size. Have a good supply of properly prepared potting soil at all times in readiness. Two parts leaf mold or well decomposed muck, one part garden loam, one part fine sand, and one part finely pulverized and well rotted manure, make a good soil for potted plants.

Seedlings of sufficient size, should be transplanted either to small pots or set in the open borders.

Verbenas and Petunias—Make early preparation to increase the supply of young plants by layering and putting in cuttings for in-door blooming next Winter.

Water—Give as may be wanted. A little may be necessary night and morning upon plants in small pots in a dry atmosphere. Examine after rains to see if drainage is perfect.

Apiary in June.

BY M. QUINBY.

June is the swarming month of the season. Any one wishing to increase his colonies to the utmost, must secure at least one swarm from each stock that is sufficiently strong. Occasionally a good stock will exhibit all the indications of swarming, and yet refuse to leave; if it is determined to make the most of such by artificial swarming, do it *now*, otherwise, the chances of rearing a queen are greatly diminished. If done at the right season, with proper precautions, there are some advantages over natural swarming; yet the trouble of making such, is often a little more than the *hiving* of a regular swarm. In artificial swarming, as the old queen is to go with the swarm, it is well to give the old stock from which she is taken, a finished queen-cell, that a young queen may take the place of the old one, and as little time as possible be lost in breeding.

Within a week after a first swarm has issued from a stock, examine it and see if a sealed queen-cell can be had. As long as such cells may be obtained, it will generally do to operate. The bees may be kept quiet by the means mentioned last month. Just before dark, is perhaps a little better time to operate, than in the morning. If it be a common hive, and the bees are outside, raise it carefully without any jar, and set it on small blocks; sprinkle the bees moderately with water, and gently disturb them with a small stick until they all enter the hive. Have ready to receive the bees a hive that has a bottom very nearly the size of the old one. Turn the full one bottom up, and set the empty one over; stop all openings that will allow a bee to pass, with rags or paper. Rap on the lower hive with a stick or hammer a few times, lightly, but enough to arouse them thoroughly, and then leave them quiet about five minutes, for the bees to fill themselves with honey. Now beat the hive eight or ten minutes, not striking hard enough at any time to detach the combs. By this time, the bees will have lost all disposition to sting, and the upper hive may be raised to inspect progress. When about two thirds are up, they are right. Set the new colony on the stand for fifteen or twenty minutes; if the queen is there—as she will be nine times in ten—the bees will be quiet, otherwise, uneasy and running about in search of her, when it will be necessary to drive again, using for the purpose another hive.

If both hives are of one color, set the old one about two feet in front of its former stand; if of different colors, a little more distant. Should there be room on each side of the old stand to set them, let each be about eighteen inches from it. Before turning over the old hive, ascertain if possible, if it contains any finished or nearly completed queen cells—this is a convenient time, while but few bees are in the way—if such cells are not there, it will be necessary to introduce one obtained from another hive. It may be put in now, at the bottom, or the next morning at the top—opening a hole for the purpose.

There is much risk in depending on the bees rearing a queen, especially if they have none started, and it is near the end of the swarming season. They will sometimes destroy a cell that is given them, in which case it will be necessary to supply another. With the movable frames, the middle of the day is preferable for operating, as fewer bees are in the way when looking for the queen. Look for her on each comb as it is taken out, and when found, put the frame containing her with the bees on it, in the new hive, and set this on the old stand. If no well advanced queen cells are found on any of the combs, put one in the hive somewhere, as before directed, then remove the hive to any convenient place, away from the old stand. The bees returning to the old stand, will form the new colony, and enough will remain in the old stock, to keep that in good condition.

When the season is a very good one for honey, bees in the common hive are quite apt to swarm too much. Second swarms the last of the month, are seldom of much advantage—with the movable combs they may be kept back. Five or six days after the first issue, open the hive, and cut out all the queen cells but one. When two second swarms are united, they are about equal in number with one of the first. Third swarms are ordinarily half as large as the second, and should be returned to the parent stock when practicable, (for directions, see Apiary for June 1859,) if not, try and unite with others, till you get a strong colony—one such is worth half a dozen weak ones. Where there are many old stocks, it would be well enough to save three or four queens, with a few hundred workers with each, to supply colonies that will be destitute after it is too late to obtain cells. When a queen is lost from an old stock, it usually happens two or three weeks after the first swarm; with young swarms it occurs in from one to ten days, and generally with those that are accompanied with young queens. It is nearly always manifested the next morning afterward, by the uneasiness of the bees: they will be seen running about while others are quiet. In such cases, a queen, or a cell containing one, introduced, will make all right ....Boxes for surplus honey should now be put on all hives where the bees are crowded. Pieces of clean white comb fastened in the top of each box with melted wax, are very important. If plenty is on hand, let these pieces be large, but divide it if necessary, to supply all. If old colonies can be induced to commence in the boxes before they swarm, they are quite sure to continue afterwards, and often fill them under circumstances when they would not make a beginning....In putting on and taking off boxes tobacco smoke will keep the bees quiet with the least trouble....New swarms, when *very* large, unless near the end of the season, may receive the boxes immediately on being hived. With those of ordinary size, it is as well to wait three or four days, or until just before the hive is full....Glass boxes, which are the best for market, must have an outer cover to shut out the light; but for those of wood, only a shelter from the rain and sun is necessary.. If any old stocks, (by this term I mean any that have been wintered) do not increase as they should, ascertain the reason. If they have no queen, give them a small swarm with one; if diseased brood is found, drive out the bees to begin anew. Keep all honey that such hives contain, from being taken by other bees....Remove all combs from the Apiary that have not bees enough to protect them from the moth....Any combs to be saved for future use, may be smoked with brimstone occasionally, to destroy the moth worm.

Moving an Asparagus Bed—Splendid Asparagus.

There is nothing produced in our garden which we would not sooner part with than our asparagus. We have had a fine old bed which has yielded a daily abundance for our table, and some to spare. But in changing our grounds the present season, this favorite bed chanced to be right where we wanted a magnolia tree on a new lawn. We hesitated long about disturbing it, as it had just commenced giving the usual supply. But we finally decided to dispense with its use for this season, as we supposed. Accordingly, on the 10th of May, we laid out a new bed, 15 by 30 feet, cutting deep wide trenches across it, and scattering in a liberal supply of crushed bones for a permanent manure, with a small addition of bone sawdust for immediate effect. The old bed was then thoroughly watered, and the earth taken up in masses of a peck, to a half bushel or more, each mass containing a cluster of roots. These clusters were transferred to the trenches, and again watered, and earth filled in around them. The very next day new shoots began to appear and now (May 17th) the new bed is yielding just about as good a supply as before the change of location—to our no small surprise and gratification.

We thought we had as good asparagus as any one—the real "giant" kind, made so by good soil and plenty of manure—but we must own up beat. The evening of the very day we moved our bed, as if in anticipation of our necessities, Mr. Henry J. Smith, of Richmond, Va., sent us in by express, (charges all paid,) a large bucket filled with bunches of the finest asparagus we have ever seen. The stalks, 8 to 10 inches in length, and 3 to 3½ inches in circumference, were blanched white, and were so tender and brittle, that they would hardly support their own weight, when lifted by one end. They were crisp, clear to the bottom end. The bunches were wrapped in dampened muslin, and holes were bored in the bucket lid to admit air. Though they were three days in reaching our country residence, they were in excellent order, save a little sourness of some of the stalks, which was entirely removed by adding a trifle of soda to the cooking water. Mr. Smith will lay us under still greater obligations, if he will describe to our readers his method of producing *such* asparagus.

What to Plant in Vacant Spots.

In a well assorted garden, very little ground will be left unoccupied throughout the whole season. As one crop is gathered another will take its place, and where poor seeds, insects, or other mishaps have left vacancies, the wide-awake gardener will be up and at work to fill them before the weeds have taken possession. It is desirable to secure a succession of some varieties as lettuce, radishes, peas, corn, etc. For part of these we must leave the space free until the proper time of planting; others may be dropped here and there as earlier sorts are gathered.

We may yet get a late crop of Early Kidney or even Lima beans by putting them in at once. The latter need not be lost if they should not fully ripen in the Fall; picked off while yet green and dried in an open loft, they will furnish a fine relish for a cold winter's day. Melons and squashes may still be planted and if stimulated to rapid growth by poultry droppings or guano, and shortened in to favor the growth of fruit, many good specimens can be gathered. It will be well in such cases to take off the later setting fruit which has little prospect of ripening; the strength of the vine will go to improve what is left.

Cucumbers for pickles need not be planted until from the 10th to the 20th of the month. They will have abundant time to reach the proper size before frost closes the season. The insects will find their tender shoots greatly preferable to the fibrous leaves and vines of older plants; they must be carefully watched.

Peas put in now will be less liable to attack from the weevil which earlier in the season deposits its eggs in the young fruit. It is well to reserve the principal crop to be planted about this time.

If pains were taken to secure a patch of very early potatoes as recommended in the *Agriculturist* for March, they will be ready for the table during this month. Corn for late use may be planted, or cabbages set out between the rows now; they will have room enough until the potatoes are dug, and be ready to occupy the ground left by that crop. Cabbages will also come in well where the spinach sown last Fall, has grown too large for the table; enough of the latter should be left for seed.

Beets are still in season for late sowings, and if started at once will be available for Summer use. The middle or last of the month is the right time for putting in the Winter supply. Vacant corners here and there if large enough for only a single beet will look better thus occupied, than left open, or filled with purslain or pigweed.

Turnips will also occupy an important place, and may be put in from the first of June to the middle of July, or even later.

Insects and Fruits—A Familiar Talk.

[The following dialogue was furnished too late for its regular place on the inside sheet, and being important at this season, we insert it here, though out of place.—Ed.]

Young Farmer.—Well, neighbor, I am glad you happened here this morning. I have been awake an hour or more, thinking about going into raising fruit more extensively, as I read an article last evening about the profits of the business, which seemed to make it very plain that it would pay better than anything else I can do. But I have been looking at the dark side of the subject, and have hardly faith enough to plant another tree. There is no difficulty in getting and planting fruit trees, and in making them grow well, and there is a good demand for all fruit that can be raised, at high prices; but what's the use of raising a crop for *insects* to destroy? When I bought this farm there were plenty of old trees upon it, but my plums are stung, and fall off when half ripe; my apple, peach, and quince trees look sickly; a blight curls the peach leaves; and the caterpillar nests cluster thickly in apple, pear, and cherry trees, alike. To get a perfect specimen of ripened fruit, is a rare thing.

Old Orchardist—I can readily appreciate your difficulties, and you are not alone in this respect. Many others who formerly produced abundant crops of fruit, are now discouraged. Time was when nature's provisions for keeping noxious insects in check were amply sufficient to make fruit-growing an easy matter. The insects were appointed to keep in check a too luxuriant vegetation; and birds were provided to keep the insects themselves within due limits. But the balance has been destroyed; the birds have been in a measure annihilated, and the insects have gone on multiplying until they now hold almost undisputed sway. Still we can resort to other remedies, and by a continued warfare with the destroyers, we can greatly lessen their ravages. I yet find fruit-growing feasible and profitable, and an annual return of good apples, fine plums, cherries, peaches, and quinces, rewards all the care and labor required to obtain them.

Young Farmer.—I am glad to get a word of encouragement; I love fruits, and I would ask no more pleasant business than fruit growing if I could by any amount of labor succeed. Let us walk out among my trees while waiting for breakfast...... See that fine old apple tree. Away in the top are two caterpillar nests from which there will come forth an army of insects to riddle the leaves, and leave the tree as bare of foliage as if it had stood in a burning brush heap. This has been the case for years past, and the apples, deprived of the shade and nourishment of the leaves, have been sickly, sorry looking, half-grown specimens. I have pulled down the nests, and have shot them to pieces with guns charged with powder only, but the caterpillars build them again, as fast as I can destroy them.

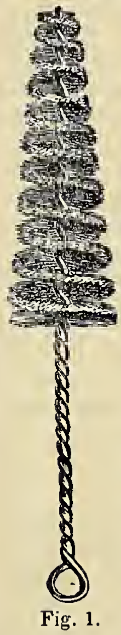
Fig. 1.

Old Orchardist.—You have probably done this too late in the day. During Spring, the caterpillars gather in these nests at night, and do not leave them in the morning until the dew is off, and then they scatter over the leaves, and are safe while you pull down their house, which they at once rebuild. You should destroy the nests as soon as they appeared in Spring, and this should be done *early* in the morning. It is the early man as well as the "early bird that catches the worm." To remove these nests I use a spiral brush, of which here is a sketch (fig. 1). It is simply bristles twisted between wires, and can be bought ready made at the agricultural or brush stores for a small sum. This I tie upon the end of a pole, and twist it into the nests and pull them down and burn them. By following up this work carefully for a few mornings in Spring, I have succeeded in destroying nests of the caterpillar tribe, and should have been rid of the pests long since, but from the fact that a neighbor of mine raises them in his trees, and a colony annually emigrates to my orchard.

Young Farmer.—I will send for one of these brushes, or make one, at once, and try your early-in-the-morning treatment. But what have you to say of this cherry tree just here, and that pear tree there. There are no caterpillar nests visible, and yet their leaves are riddled to skeletons, much like those shown in the April number of the *American Agriculturist?* My rose bushes are similarly affected.

Old Orchardist.—I am afraid you are not a careful, close observer, or you would have found upon these leaves thousands of the little slugs or small green worms, tapering all the way from the head to the tail. There are several varieties of these, resembling each other enough to be cousins at least, and these do the mischief you refer to You must make their habitations unhealthy for them, by tying a small muslin bag to the end of a pole having previously filled it with ashes or slaked lime. Shake this over the plants until they are well dusted and the slugs will "quit or die." Or you may treat them to a shower-bath thus: Dissolve a pound of whale oil soap, (which will cost but a few pennies) in about six gallons of water. Throw this upon the leaves, under and over, with a hand syringe or garden engine. This will destroy the first brood. A week or so after, another brood will be hatched, and these must be destroyed in like manner. A few applications of this kind, either the ashes or lime dust, or the whale oil soap, will dispatch the slugs and their progeny.

Young Farmer.—I will try it; the cost and labor are nothing compared to the benefit, if I can get rid of their trouble. But how about the plums! I have a fine crop started as you see, yet judging from the experience of the past two years, I shall not have a perfect ripe plum.

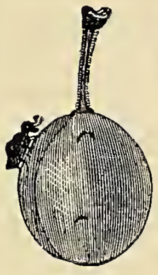
Fig 2.

Old Orchardist.—Here, look at this specimen and you will see the "turk" himself—this little brownish bug—curculio they call him—that you have perhaps not seen before because you did not look sharply after him. He is a troublesome fellow at best, and so troublesome that a score or hundred men have set their wits to work to compass his destruction. We have had all sorts of remedies and nostrums proposed, patented and unpatented, public and secret, sure cures—but most if not all of them are unavailing. I have found nothing so effectual as the lime or ashes dust bag used frequently about the time the fruit sets, and until the plums are of considerable size, and the skin hard—say when the fruit is two-thirds grown. The dusting should be done in the morning, when the tree is wet with dew, and two or three times a week. You will thus get a fair crop of perfect fruit, worth much more than the trouble it costs. Some have found the whale-oil soap beneficial, applied two or three times a week as recommended for the dusting. You might try this on a tree or two and note the results. I have been satisfied with the dusting. As you have a large stock of curculios, I would advise you to try both; that is dust the trees once or more a week, and treat them to soap about as often, say three days after each dusting.

Young Farmer.—Over here are some recently planted apple and pear trees, whose trunks and larger limbs have not a bright healthful look; what is the trouble with them? Neighbor L says I manured them too much.

Old Orchardist.—Look carefully at the bark, and you will see whitish specks or scales. There are a few large ones remaining from last year, but most of them have fallen off. I will raise one of the old ones with the point of my knife, and let you look on the under side with my pocket microscope. You see quite a mountain heap of eggs under each scale. You perhaps see one or more insects already hatched. These are the eggs of the "scale" or "bark-louse," but most of them have hatched out, and the white specks are the young insects. Washing and rubbing the bark with a cloth dipped in water, in which a little soft soap, or potash is dissolved, will take off these "scales." To save the hands, a swab or mop may be used. All these operations take time and care, but "without pains there are no gains," and I have found nothing to pay better than the time I thus expend upon my trees.

Young Farmer.—I confess I have been a superficial observer. I have not looked closely to these matters, and until this morning have not examined the insects themselves. I shall take a new start; and I hope by next year to have trees worth showing.

Old Orchardist.—There is one other enemy to be feared, and against which it is well to exercise a little forethought. It is rather early just now, but by the middle of June, if you come into the orchard at dusk, or during a moonlight night, you will see pretty brown millers flitting about among the apple and pear trees. These are the parents of the worms found in the fruit. The millers deposit their eggs upon the tender fruit, where they soon hatch, and the little worms enter the apples or pears, causing them to fall prematurely. Several methods have been devised for entrapping the parent millers. Advantage is taken of their night flying habits, and bonfires are sometimes built to attract and consume them. Flambeaux made by winding tarred rags upon sticks, will burn for a long time when placed in the orchard and lighted. A burning lantern may be suspended in the tree, and a vessel of soap and water, or sweetened water made secure beneath it. The insects strike the lantern and fall into the water, or are even attracted by the sweets. A late contrivance, is to cover an upright square or round surface of wood or tin with phosphorus, which shining in the dark, attracts the night insects. A vessel of sweetened water is secured below it to catch those that fall, or to entrap them when drinking. A broad flat top sheds the rain. By pursuing one or all of these methods, wormy apples will be scarce next Fall.

We must pay our respects to the *borers* before going. The old worms quite likely have left the trees, but it is well to dig into their holes, close to the ground, and destroy any remaining. Our chief aim, however, should be directed towards preventing further attacks. The last of this month, or early in July is the season chosen by the winged insect to deposit eggs. She usually selects nice young trees and lays her eggs upon the bark near the roots. By removing an inch of soil and tying some stiff paper—tarred if convenient—for a foot or more up the body, replacing the earth afterward, the beetle will usually go elsewhere to deposit her eggs.

Death on Bugs.

These lively fellows are abroad enjoying themselves these pleasant June mornings. If they only had a grain of discretion, and would feast on dock and burdock, we should be content to see them thrive. But unfortunately they are epicures, and delight in squash, cucumber, and melon vines. And the finer and more delicate the variety, the more intent they are upon devouring it alive. Nothing is so savory to them as the Boston Marrow, and the Hubbard squash. They will feed upon the fat of the land while they are above ground.

How to put them under and keep them there, that's the question? They have more than a ghost's propensity to rise, and unless great vigilance is exercised, they will cut off the squashes and melons. The period of peril to these vines only lasts about ten days, and if they can be guarded for this time, they will take care of themselves. A box with a glass over the top, or a thin piece of muslin is a perfect safeguard, and some start all these plants in boxes, and keep them there until they get the start of the bugs. But this is quite too much trouble for most cultivators who do not keep a professional gardener.

Others appeal forcibly to the instincts of the great bug family, and surround the plants with a cordon of anti-bug odors, that puts them to flight. This is a legitimate warfare, thwarting brute instinct with human cunning. A favorite application near the shore, is clams, or any other cheap fish or offal put upon the surface of the hill. A great advantage of this application is, that it is a good manure for the plants, and gives them a start after it has started the bugs.

Other experienced gardeners save their vines by an application of Peruvian guano and plaster, one part of the former to three of the latter. It is put upon the leaves, top and bottom, with a dredging box, and sprinkled upon the ground. An application should be made to the leaves after every rain. This also is a good fertilizer for the plants.

Others resort to compounds that appeal to the taste rather than the olfactories of the bug family. If he will eat and drink of the juices of these plants, they give him a bitter dose in the shape of quassia, steeped in hot water for a day or two. The quassia tea is applied every morning, or evening, until the plants are out of danger. We have tried this with favorable results. Ashes and soot are more common applications, and are in a measure efficacious. The trouble with these remedies is, that they are not applied often and thoroughly enough. Ashes will not protect the plants after they are washed off by the rain.

Whatever remedies are used, it will be necessary for the gardener to visit these plants two or three times a day while they are in peril. Examine the plants closely, and apply the thumb and finger to all bugs that have not been reached by other methods. This is the final argument, and leaves the plants, masters of the field.

Destroying Cut Worms.

To the Editor of the American Agriculturist:

A few years since, I destroyed cut worms from a field of corn, after a method somewhat similar to the one mentioned in the last *Agriculturist.* I hitched a horse to the forward wheels of a light wagon, then took two rake handles, cut them just four inches longer than the diameter of the wheels, and tied them across the wheels, so that when I drove over the field, there would be a smooth track made by the impression of the wheel for the worms to travel in, and a succession of little pits for them to fall into, made by the projecting rake handles. The next morning, on going over the ground, I found I had caught thousands in the pits. They all died in the sun before noon. If it had rained, the earth would have fallen upon them, and they would have lived. I think five to eight inches too deep; one and a half or two inches is the proper depth.

Newport Co., R. I. J. E. MACOMBER.

Gas Tar upon Fruit Trees—Caution.

To the Editor of the American Agriculturist:

I wish to caution your readers against the use of coal or gas tar upon the trunks of fruit trees. I have often seen it recommended in the various periodicals as a preventive of the attacks of the borer, and mice. I used it myself to prevent mice gnawing the bark, and know the remedy is as bad, if not worse, than the vermin. It kept off the mice, but the tar became so hard, that I was obliged to slit it down to give room for the tree to grow. My attention was called to this by seeing what you wrote on page 121, April *Agriculturist*, where I observe you advise against applying tar directly to the tree.

Lincoln Co., C. W. JAMES TAYLOR.

Scientific and Practical Talks About Manures.....V.

(Continued from page 107.)

From the facts and theories stated in our discussion thus far, we may now lay down as general rules: 1. All organic substances (that is, those of animal or vegetable origin.) have more or less value as fertilizers for crops. Even allowing that *mineral* salts are necessary, they are supplied by the various organic manures added to the soil. 3. These organic substances are valuable as fertilizers in proportion to the amount of ammonia or nitrogen they contain.

We may therefore reckon as manures · straw, leaves, hay, roots (including muck or black earth containing decayed fibres of roots, etc.,) solid or liquid animal droppings, flesh, unburned bones, in short, everything that has formed a part of the organic structure of vegetable or animal growth. Every thing of this kind, produced, or found on the farm, should be carefully husbanded and applied to the soil. No cultivator desiring and deserving success, should allow a single pound of such materials to go to waste. It is much more economical to gather from the forest the leaves that lie thickly strewn upon the ground, and rot them in the compost heap for manure, than to buy the best fertilizers, or what is worse, put up with half a crop. It is far more profitable to gather sods, or black earth from the swamp or low land, and rot it with the manure heap, or with lime or ashes, than to buy even bone-dust or Peruvian guano. No cultivator can afford to buy fertilizers, while he has unused barn yard manure, poultry droppings, or human excrements, or while a dark stream of water charged with the essence of his manure heap, is flowing off into a gulley, or upon a plot of ground where it is not needed. It is more profitable to cart earth into the yard to absorb this wasting liquid, and cart it out to be spread upon the field, than to buy at a distant market, at half the price now asked for them, any of the various articles sold as fertilizers.—When all these home supplies are looked after, and properly used, then it will usually pay to buy in addition, some such fertilizer as pure Peruvian guano, or pure bone meal (not the compound of plaster or lime and bones, too often sold as pure bone dust.)

The *comparative* value of most of the home-produced fertilizers has already been indicated. We value them in about the following order: Solid human excrements, poultry droppings, sheep dung, horse droppings, cow manure, leaves, muck, etc. Unburned bones and urine might be placed first on the list, but bones can not well be used, except for fruit trees, without first grinding or dissolving them, which is not always practicable; and urine is usually absorbed, or should be, in the mass of manure and litter. Poultry droppings are increased in value, by the fact that the solid and liquid excrements are voided together in a solid or semi-solid mass.

The coarser straws of wheat, rye, barley, etc., are mainly woody carbonaceous substances, yet they contain some nitrogen, and they serve admirably to absorb the fluids from the animal droppings; and when mingled in a partially rotted state with the soil, they furnish additional carbonic acid directly to the roots of plants.

while by their decay they leave heavy soils open and porous, which is of decided advantage to growing crops. Nearly the same remarks apply to leaves, and muck or swamp mud. These substances contain an appreciable amount of nitrogen, and being usually abundant and cheaply obtained, their free use is profitable both for their nitrogen, and as amelioraters or looseners of the soil, thus improving its mechanical condition.

Probably the cheapest way of manuring, is the plowing in of green crops, especially clover. Clover plants gather from the air a large amount of nitrogen, and when plowed under, this is added to the soil. Our almost invariable prescription for a poor soil would be: manure it enough to bear a crop of clover, and then plow this in, and sow to wheat or rye, or plant to corn. If so poor that it will not produce clover, even with manure, then plow under something that it will bear, such as rye, buckwheat, or other crop. Keep plowing in such crops until you can get a growth of clover; then turn this under, and the soil will bear almost any crop you desire. Whether it be clover, or any other crop, let it grow until near the full flowering season, and then turn under as large a mass as possible. It does not pay to pasture down the crop, until little else than roots and stubble are left, but get the largest, fullest growth possible, and let it all go under the surface, as so much capital invested for future returns. We speak of poor land especially. On a moderately good loam, we have pastured down once in the Spring, and when a second fair growth was obtained, say towards the end of June, we have turned that deeply under, harrowed the surface in August, and then given it a thorough harrowing and cross-harrowing early in September, and sowed on the wheat, without a second plowing to distribute the sods. The results have been good, but usually on poor soils it has paid best to keep cattle off entirely, and turn under the whole growth about the time the clover came into full bloom.*

Shall coarse manures be applied whole, or be first composted?—This is a question frequently asked, and one much discussed by cultivators. By *composting* is meant the heaping together and fermentation of the manures, until they are partially or thoroughly rotted. Owing to the loss of a part of the matter during fermentation, as manures are usually composted, (that is, left carelessly in heaps about the yard, exposed to sun, and washing away by rains.) we were formerly much in favor of applying them without composting, except in special cases; but the more we have studied the subject, and gathered the results of experiments, the more strongly are we impressed with the value of a thorough composting, where it is properly done. When to be applied to a heavy and compact soil, which is of comparatively good quality, it is well to use uncomposted coarse manure, to render it less compact; but for general use, the more thoroughly the manures are rotted, and made ready for thorough mingling with the soil, the better; *provided always*, that the composting be properly done.

Composting, or rotting of manures, should, so far as possible, be always done under cover. The amount of rain falling annually upon the earth, is large enough to cover the whole with water to the depth of an ordinary barrel. In other words, if a field were covered with empty barrels, the amount of rain and snow falling during a year, would suffice to fill all the barrels. Any one can judge of the effect upon a manure yard, of covering it with barrels full of water, and then pouring these all out upon the manure. A large amount of the richest portions of the manure would of course be washed away. But this, in a degree, is just what is taking place in most of the yards in the country. The manure is left where the rains wash out the best portions. In very many instances the case is still worse. The manures are not only washed by the rain falling naturally upon them, but they are also treated to the water from the eaves of the barns or stables. In perhaps five out of six cases, horse-stable manures are thrown out of a side window, and it is a matter of chance, if rain from the eaves does not fall directly upon the heap. Manures should always be thrown together in a compact heap under cover. If no better cover is at hand, a few boards thrown over, to shed off the bulk of the falling rain, will answer very well. The surface of the heap should always be kept moist, as this will prevent the escape of ammonia, which is retained by moisture, unless in excessive quantity. The recent experiments of Dr. Vœlcker show pretty clearly that there is less loss by evaporation, than was formerly supposed, both when manures are fermenting in a heap, and when they are spread upon the surface of the soil uncovered.

It is always better, however, to keep a manure heap covered with a bed of soil, or, what is still better, with muck or sods. These absorb all the escaping gases, and are themselves enriched. It is profitable to mingle with all manures just as much muck, or leaves, or sods, or surface soil, as can be added without stopping fermentation. Horse manure will bear a large addition. Cow and hog manure ferment less easily, and therefore bear a less proportion of unfermentable material added.

No lime or ashes, or other alkali, should ever be added to the manure heap. These produce too rapid decomposition, and set at liberty the most valuable portion, the ammonia, and it is lost. There may be an exception, as when the manures are desired for immediate use, in which case lime or ashes may be added, provided, plenty of moist muck or soil, containing no lime or ashes, is placed upon and around the heap to absorb escaping gases. Where muck is to be used with manure, it is well to mix it with ashes or lime by itself, and let it lie for a time before adding it to the manure heap.

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* We wish a score or more of persons, whose letters are now on our desk, would take the above as our "prescription" for the poor fields, upon the treatment of which they ask our advice. We can suggest nothing better.

Look out for a short Hay Crop.

The extraordinary dry weather for a month past has not been favorable to a heavy growth of grass, and the prospect is not now very good for an abundant supply of hay. The prudent farmer will save all the mowing ground he can, by providing other feed for his stock. Nothing is better for stock, than a good lot of corn, sown thickly in drills, to be cut up and fed green. Aside from saving the meadow, there is great economy in having a mass of green, succulent food for all kinds of stock during the season of dry, short pasturage in the later Summer. It is well to set apart a field, and sow corn, or millet, on separate portions of it, at successive intervals of 8 to 12 days. This will keep up a continuous supply of green food. If there is an excess, all the better, for what remains when good Fall pasturage comes on, may be cut and dried for Winter. Indeed, there should be a quantity grown for this very purpose, which will aid in making up any deficiency of hay.

Try the Hay Caps.

The first man that ventured to wear an umbrella, was hooted through the streets of London, and those who introduced the use of hay caps, encountered almost as much ridicule. But they have continued to win their way each season; those who have tried them, assure us of their great benefit. The damage prevented during a single storm has in many instances more than repaid the first cost. Now is the time to provide them, before the hurry of haying and harvest, leaves no leisure for any business away from the farm.

Plant Corn in June.

The weather has been so dry and favorable for field work, that most persons had ample time to put in all desirable crops. The indications are that the season will be more favorable for corn, than for grass and oats, which can not bear the heat and drouth so well It may therefore not come amiss, to get in an extra acre or two of corn, and this can be done well in the first week of June. We have seen many a good crop of this grain planted as late as June 6th to 10th. When the seed is put into a warm soil, it starts quickly and grows rapidly, and not unfrequently overtakes that planted a month earlier. The prospect ahead now appears favorable for "good times" again. Let every one help on the country, and himself, by planting "one acre" more this month.

Long White French Turnip.—This turnip we esteem more highly than any other for table use all through the year, or until new early turnips are produced. We have distributed among our readers more than a fourth of a ton of it, and the general verdict is in its favor, though some have not found it to grow well. It may be sown as late as the first week in August, and with a favorable Autumn, a good crop will be usually obtained. Judging, however, from our own experience, we think it best to sow the first of June for Fall and early Winter use; and in the last of June and first of July for later Winter and Spring cooking and feeding. The seed is still on our premium list, as noticed on another page.

For the American Agriculturist.

Hints on Selling Produce and Bargain Making.

The successful farmer must be a good business man. It is not enough that he can raise a hundred bushels of corn per acre; he should know when and how to sell it, and how to make sure of his money. It is observed of some men, that they always hit just the right time to sell, when prices are at the topmost notch, and that they are equally fortunate in buying, the market seeming to go down for their especial accommodation. Some *may* be born with a gold spoon in their mouths, but they are exceptions. Steady adherence to a few plain maxims has done more to secure competence to the fortunate, than all the "lucky stars" that ever shone. The following suggestions indicate a few of these principles.

It is safe, as a rule, to sell when the market has settled to a steady price, rather than to wait with expectation of a fortunate rise. There are periods, when everything fluctuates. The operations of speculators or other disturbing influences, cause a feverish anxiety among dealers, and prices change rapidly; but when the flurry is over, prices find the level which the relations of supply and demand invariably fix. The man that waits for some such disturbing cause to raise the tide, that it may flood his pocket with a high price, will be quite as likely to wait a little too long, for the ebb of such currents is always rapid, and the reaction almost invariably brings a period of corresponding depression. After the bulk of the crops in the country is secured, and sufficient time has elapsed for dealers to learn the amount of supplies on hand, prices are usually steady, with a fair demand; then it is safe to dispose of produce. An average of prices obtained for ten years under this system, will exceed what is received by those who wait for the highest rates.

In his anxiety for returns above the market, the farmer is often tempted to sell on credit to unreliahle parties. If prices go up, he receives his pay, if they fall, the speculator "breaks," and the producer loses. The loss of a single crop in this way has crippled many a man for years. If credit must he given, know your man, but sell for cash, if it be possible. The producer having waited months for his crop to yield, can ill afford to wait months longer for them to be turned into money.

In making a bargain, nothing is gained by higling, or setting a price above what is really expected, and then falling by degrees to the required sum. Let the seller inform himself of the real value of his commodity, fix his figure, announce it at once, and not deviate from it. Buyers soon learn their man. They meet the chafferer with his own tactics, and usually with the advantage that it is less necessary for them to purchase, than for him to sell. If they can beat him down a notch below the market, the bargain is made, otherwise they will at least wait until another time. But a man of one price—if he is reasonable in his expectations, saves his time, does not loose his self-respect by the reflection, that he has overreached or been outdone by another—is applied to by those who are ready to purchase, and in the long run is better paid than he who "uses many words in buying and selling." The higgler is approached with caution, you feel that you must look out for him, you are not safe in believing his statements, for his practice tends to dishonesty; you may go with all confidence to the fair dealer, knowing that his terms do not vary, and you can buy of him as favorably as the shrewdest speculator.

In all contracts, a full and plain statement of terms in writing, is the best preventive of misunderstanding. The form is of less consequence than such a record of details as leaves the meaning clear and explicit. Ten drops of ink, rightly put on paper, may be worth many times ten dollars in ill feeling, or lawsuits and costs.

There is a class of farmers who rely more on their powers of hargain making, than upon the productiveness of their soil. When others are plowing and planting, they are huying and selling oxen. They will leave the cornfield unfinished for a chance to trade horses, and a vendue will attract them from every other occupation. One of this class is usually known by the remarkable assortment of wagons, carts, and miscellaneous implements scattered about his premises, generally by the roadside; by the backwardness of his fields, the dilapidation of his fences, his breachy cattle, marauding hogs, balky horses, and complaints of hard times. Always ready for a "trade," his neighbors find him of service in relieving them of undesirable stock, and his place becomes a kind of eddy, into which the rubbish of the town is swept. But as such persons seldom read the *Agriculturist*, advice here would be wasted; they are mentioned only as we would set up a finger post with the inscription: "A hard road to travel," which is a sufficient caution to the wise to avoid it. HOMESPUN.

Berkshire Co., Mass.

Advertising Information—Gratis....X.

We ought to be rich—we've had the assurance of it many times. Advertisements glittering with golden promises, have beguiled many a dollar from our hard earned gains. Have we not invested in recipes, books, powders, pills, inventions, gift enterprises, and western lands? Where is the pile we were to make by the "Hunter's Secret," "The secret art of catching Fish," "The Honey Recipe," the tea plants, and Dourah Corn? We know where it *isn't*. Although we have said little on the suhject for some time past, we have not been idle, but have continued to follow up every avenue opened hy the kind-hearted advertisers, hoping to find some way to wealth, by which not only we, hut all our readers, could with one grand stroke, or at least, by a good many little strokes, make money—with what further success shall now appear.

[No 33.]

WANTED. THE "LITTLE MONEY-MAKER." The most salable article in the known world. Agents wanted everywhere. For particulars, directions, and sample, enclose four red stamps to ——, ——.

That looked a little suspicious. The *Little* money maker. Well, "little and often" fills the hucket; perhaps it's all the more certain for coming hy *littles*—at any rate, the stamps were sent, and here's what came of it. Messrs. —— & Co. return us a sample of their self-sealing newspaper envelope, worth perhaps a third of a cent, which they offer to sell us for $1 per hundred, and we are to make our "little money" by retailing them at two cents each. They seem to be ashamed of the little operation, by which they make at least one red stamp, for they say in their letter:

"We have been forced to adopt a system of advertising, which may seem at first glance to be an imposition, that is, requiring four stamps for a sample, hut *we return their equivalent on first order*. We have done it for the reason that we are daily in receipt of letters from parties who write us merely out of curiosity, and with no intention of engaging in the husiness, and to whom we are obliged to send circulars, pay postage, and in many cases write letters to no purpose whatever, and we deem it no more than simple justice that they should pay us for time spent in such a manner."

To which we reply. Messrs. ———, had you advertised plainly what you had to sell, our curiosity would not have been excited, we should have saved twelve cents. However, it may be worth that amount for our readers, to know how *little money* can be made, by noticing any advertisement of this class. It appears by the extract quoted above, that other parties are paying Messrs. —— for exciting their curiosity, and spending time in gratifying it.

[No. 34.]

MEND YOUR OWN TIN WARE. A new and novel process, so simple that any person can mend all their old leaky tin ware, kettles, etc. Implements and materials, with full printed directions, sent to any address on receipt of 25 cents, by ——, ——.

The above appeared in the *Country Gentleman* a few weeks since. To be sure, not a great deal of money was promised, but then, a penny saved is a penny gained, and stopping leaks is one of the very first principles of economy. A soldering tool alone would cost fifty cents, to a dollar or more, and this man offers everything necessary for a "quarter," and we concluded to invest.

A letter soon returned, enclosing the necessary "implements, materials and directions," to wit: a small piece of brass wire, flattened at one end, a small strip of sheet lead, and about ¼ oz. of saltpeter, we judge, hy the appearance. They cost probably one cent, all told, and are worth for soldering purposes exactly nothing. Accompanying the above was another letter from the same party, offering to sell us for thirty-seven cents a recipe for making hard and soft soap. Thank you for nothing at all, Mr. ———, you sold us once for 25 cents, and we feel too cheap, to have the price raised so soon.

[No. 35.]

DEAR SIR: If you will give the following three months insertion in your paper, among the general advertisements, where it may he seen to advantage, we will, on receipt of a copy, send to you by return mail the Engraving and also a Gift. Also after you receive the Engraving, please call the attention of your readers to the advertisement. Yours, truly, ——, ——.

MAGNIFICENT ENGRAVING OF CHRISTOPHER COLUMBUS and his Crew. This Beautiful Engraving was designed hy Rubens, one of the most celehrated artists that ever lived; the cost of the original design and plate being over $8000, size 22 by 29 inches.

SCHEDULE OF GIFTS

To be given to the purchasers. For full particulars send for a Bill.

1 Cash..$5000	1 Cash..$1000	5 Cash....$300	10 Cash. . $100
1 Cash.. 3000	1 Cash.. 500	10 Cash... 300	10 Cash.... 50
1 Cash.. 2000	1 Cash.. 500	10 Cash... 250	1000 Cash. 5000
1 Cash.. 1500	4 Cash.. 300	10 Cash... 200	2000 Cash. 5000

Together with a great variety of other valuable gifts, varying in value from 50c. to $25.

Any person enclosing in a letter $1 and five 3-cent postage stamps (to pay for postage and roller) shall receive, hy return of mail. the magnificent engraving of Christopher Columbus, (and one of these valuable gifts as per bill.) Address all orders for bills or engravings to ——, ——.

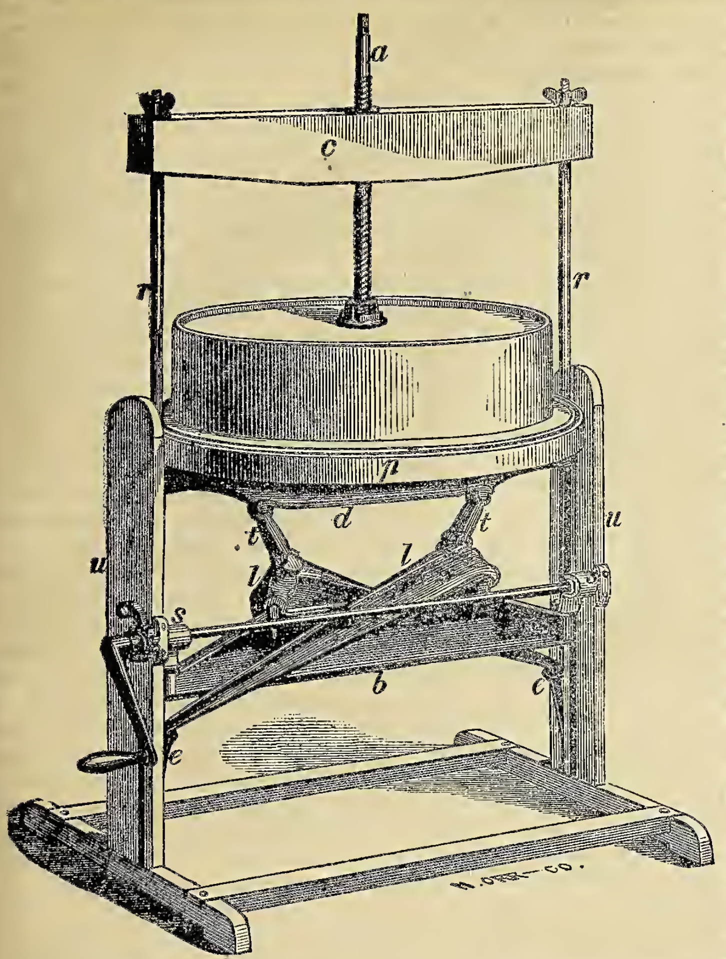
This comes to us directly from the party engaged in the enterprise, and we very cheerfully give it an insertion. As space in the reading columns is worth more than three times as much as "among the general advertisements," we expect one insertion will secure us the engraving and a gift. Please send us the first one on the list, the $5000 cash. You do not state how the "gifts" are to be distributed, and we take it for granted, we can have our choice....On second thought, we believe the above is a kind of lottery operation, in other words a gamhling enterprise, or to speak more plainly, it is a trap to catch gulls, so, we don't expect the $5000—the advertisement you are welcome to.

[No. 36.]

"Dr" ——— advertised for agents to make money fast. A reader in Tennessee inquired as to particulars, and received a circular describing a wonderful book, price one dollar, which would give information on every subject mortals would like to know about, particularly those topics ahout which nothing can he known, such as the "secret power of charms, spells, incantations," and other nonsense; how to bring a dead tree to life; how to keep cattle from growing old; how to change the color of the eyes, and hundreds of other absurdities. Our correspondent, thinking such a book would sell, sent his dollar for a specimen copy—and that's the end of that story. The man was *sold*, the book was not.

Numerous medical circulars have been received, many of them sent out from this City to distant points South and West, and returned by our subscribers for investigation. It would take all our time, space, and more patience than falls to the lot of any one man, to follow up these fellows individually—it is not necessary. If an animal with sharp nose, yellow fur, and hushy tail, comes prowling around the hen roost, he is shot at once, without inquiring if he be the particular animal that has destroyed the poultry, it is enough that he is a fox. So when a medical circular is received, promising certain relief from all diseases whatsoever, or inviting you to send one or more dollars to an unknown party for medical advice, or for a wonderful herb, root, or other specific, call it a *humbug*, and save your dollar and your disappointment. There is one class of these medical circulars, of too delicate a nature fully to discuss here, that ought to consign their authors to prison. Throw them in the fire as soon as they are received. Their statements are false, their purport wicked, their tendency ruinous. Let not their evil communications corrupt good manners.

(To be continued as needed.)



A new Cheese Press.

We present above an illustration of a press invented by E. Davis, of Vermont, we believe, presenting a novel application of power, which, upon examination, appears effective, though we have not seen it tested by actual operation in the dairy, where only its merits for that purpose can be fully decided. The principle feature to be noticed is the use of the toggle joints shown at *t, t, l, l,* by which the weight of the cheese or other article, and of the press itself, supplies the power. The platform, *p,* to receive the cheese, is fastened upon an iron cross bar, *d,* which slides up and down the rods, *r, r,* passing through eyes at its ends. Two projections on the under side of *d,* rest in grooves on the end of the short pieces, *t, t,* which move freely on these joints, and on similar joints on the levers, *l, l,* below. The levers, *l, l,* rest on similar loose joints at the points, *e, e,* and on projections upon the upper edge of the iron cross beam, *b.* The cross bar, *b,* is sustained by screws and nuts on the lower ends of the upright rods, *r, r,* which pass up through the wooden cross bar, *c.* By examining the illustration attentively, it will be seen that the whole weight of the working part of the apparatus and the cheese rests upon the points, *e, e.* If the narrow ends of the levers, *l, l,* where they rest upon the points, *e, e,* were lifted up, the levers would act upon the short pieces, *t, t,* and tend to push them out to a perpendicular position. This would raise the platform and the cheese upon it, and cause it to press against the bottom of the long screw, *a.* And the more nearly the levers, *l, l,* are brought to a horizontal position, the more nearly *t, t,* will be brought to a perpendicular, and the greater will be the pressure. Instead of raising the points, *e, e,* the weight of the cheese, platform, etc., causes the thick ends, or short arms of the levers, *l, l,* to descend, thus tending to bring the levers to a horizontal position, and making them act upon *t, t,* and exert a pressure, the same as if the other ends of *l, l,* were raised, as before described. The horizontal rod fitted with a crank and ratchet wheel, has two straps, *s, s,* which wind upon it. The lower ends of the straps are fastened to the ends of the cross beam, *b.* By turning the crank, the working parts are elevated to a proper position to receive the cheese, where they may be held by the ratchet and catch. The crank is readily detached from the horizontal rod, and used to raise or lower the long screw, *a,* which communicates pressure to the "follower," and the cheese under it.

In pressing cheese, particularly, it is desirable that the pressure should be light at first, and increase gradually to the end of the process. To accomplish this, the straps are wound up as described above, and the catch thrown into the ratchet wheel; this supports the weight of the platform and other parts, and prevents the action of the levers, *l, l.* Then, the screw, *a,* is turned down upon the follower as tightly as may be desired. When greater pressure is wanted, the catch is lifted from the ratchet wheel, leaving the weight of cheese, etc., to act on the levers, *l, l,* as before described, the power continuing to increase as the cheese yields to the pressure and descends. If more power is needed, it can easily be had by adding weights to the platform, though for all ordinary purposes, the weight of the cheese and apparatus would appear sufficient. If an actual trial of the apparatus prove it as effective as an examination indicates, it will be found valuable. The principle is applicable to other uses where pressure is wanted only in a limited space, the range being confined to a few inches. The parts are not objectionably complicated, and the price, $10, not beyond the means of dairymen generally.

The Wild Turkey.

The turkey is the most recent of our reclaimed birds. That we can not fix the precise time nor learn any of the circumstances which relate to the introduction of the turkey into Europe, may cause some astonishment, when we reflect that it must have occurred at some period after the conquest of America.

Oviedo, who resided as Governor of the port and harbor of St. Domingo, in the Island of Hayti, in 1514, published a work entitled "*Tradado de la Historia Natural de las Indias,*" which was published at Toledo, in 1526. In this work he describes the turkey as a kind of peacock abounding in New Spain, (America) whence numbers had been transported to the islands and the Spanish Main, and were domesticated in the houses of the Christian inhabitants. They were also called the "India Cock and Hen," as they were first taken from the West Indies to Europe.

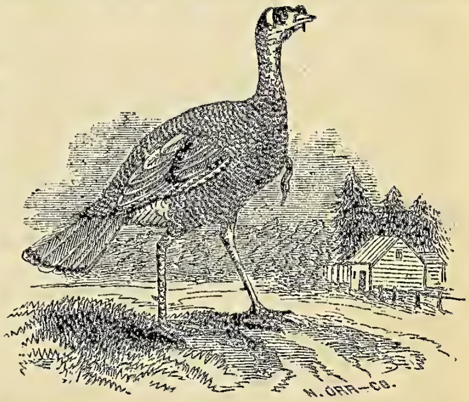
They were first introduced from Spain into England as early as 1525, and were in a short time spread over the whole kingdom, and increased to that degree that in 1555 they could already furnish a dish in country feasts. They have since been domesticated throughout the civilized world.

The turkey is strictly a native of North America, having its range from the Isthmus of Darien on the south to the 15th parallel of north latitude, and east and west, from the Atlantic Ocean to the Rocky Mountains. No individual of the species has been seen south of Panama, and it is unknown beyond Lake Superior.

Formerly they were abundant in the unsettled parts of the States of Michigan, Ohio, Kentucky, Illinois and Indiana, and an immense extent of country to the north-west of these districts upon the Mississippi and Missouri, and the vast regions drained by these rivers, from their confluence to Louisiana, including the wooded parts of Texas, Arkansas, Tennessee and Alabama, but none have been observed either on the Rocky Mountains or to the westward of them. They are, however, becoming less numerous in every portion of the United States, even in those parts where they were very abundant forty or fifty years ago. Like the Indian and the Buffalo, they are fast fading away before the march of civilization.

"The great size and beauty," says Audubon, "of the Wild turkey, its value as a delicate and highly prized article of food, and the circumstance of its being the origin of the domestic race now generally dispersed on both continents, render it one of the most interesting of the birds indigenous to the United States of America.

The plumage of the wild turkey, is compact, glossy, with metallic reflections; feathers double, as in gallinaceous birds, generally oblong or truncated; tips of the feathers almost conceal the bronze color. The large quill coverts are of the same color as the back, but more bronzed, with purple reflections. The lower part of the back and tail feathers are of the same color, undulatingly barred and minutely sprinkled with black, and having a broad blackish bar toward the tip, which is pale brown, minutely mottled; the under parts duller; breast of the same color as the back, the terminating black band not so broad, sides dark colored; abdomen and thighs burnish grey; under tail coverts blackish, glossed with brown, and at the tips bright reddish brown. The plumage of the female is less brilliant than that of the male."



It has been said by some authors, "that in a state of domestication the wild turkeys, though kept separate from tame individuals, lose the brilliancy of their plumage in the third generation;" but such is not the case with mine, which are the fourth generation from the wild bird.

The wild turkey does not attain its adult form until its third year, although it certainly continues to increase in size and beauty for several years. Females have their full size and coloring at the end of four years. The weight of turkey hens averages about nine pounds when nine months old ; and the males differ more in their bulk and weight. At nine months old I have had them to weigh from sixteen to nineteen pounds. The cock turkey, from which I am breeding, turned the scales at 24½ pounds, at one year and ten months old.

Springside. C. N. BEMENT.

The Cattle Disease in Massachusetts.

The prompt measures taken by the Legislature of Massachusetts, relative to the dangerous cattle disease, noted in our last, were not a whit too speedy or decisive. But a short time would have been sufficient to disseminate it beyond control : the examinations already made, show its progress to have been even greater than was suspected. It will be well for the country if the thorough means used, shall prevent the further spread of what has proved a scourge of the cattle herds of Europe. The commissioners appointed by the Legislature have examined the cattle in the towns of Belmont, North Brookfield, and New Braintree, and found that the infection had been taken by nearly or quite every animal exposed to it. Even where the creature appeared healthy externally, dissection showed the lungs diseased. In one or two cases there appeared a possibility of recovery, but usually it was plain that death must soon have resulted. One hundred and eight cattle had been slaughtered up to the date of May 3d, and more than two hundred more have been condemned. The appropriation ($10,000) made to remunerate the owners, having already been exceeded, the Massachusetts Society for promoting Agriculture subscribed $2,000 towards a guaranty fund to meet additional cost, and several public spirited gentlemen have contributed liberally to the same purpose, sufficient it is thought to meet the required outlay. It is reasonably expected that the Legislature will make up this sum at its next session ; at one time it was proposed to call an extra session for the special purpose. It is stated that the disease is now confined to the town of North Brookfield, and that by destroying the remaining infected herds, and using proper precautionary measures, it will be eradicated.

For the American Agriculturist.

Grooming a Horse.

"What do you give your horses to keep them in such fine condition ?" asked a young farmer of his neighbor, whose team of bays was the pride of their owner, and the admiration of the village. "Oats, carrots, and plenty of *brush*," was the reply. There is little need of insisting on the necessity of good food, and plenty of it, to have a horse remain vigorous. Every one knows that bone, and sinew, and muscle are manufactured from hay, oats, corn, etc., and that the raw material must be supplied to produce the strong limb, elastic step, and noble spirit, which make a fine horse the universal favorite he is. But the important part which the skin bears in the animal economy, and the necessity of properly cleansing and keeping it in healthy condition, are not fully appreciated. Rough staring coats, "grease" or "scratches," inflammations, and a whole catalogue of diseases find their origin in neglect of proper grooming.

The skin of the horse, like that of other animals, not only affords protection to the parts within, but by the pores affords an outlet to a large part of the waste of the body. In out-door life, the natural state of the horse, this membrane becomes thickened and tough, capable of resisting changes of temperature ; and by continual exercise, the pores are kept open, giving free exit to all the exhalations. But this alone will not give the smooth glossy coat which adds so greatly to the animal's beauty. Confining the horse to the stable, as is generally done for at least part of the year, renders his skin tender, especially when he is kept warmly blanketed. Expose him now to great change of temperature ; take him out and drive him until heated, return him to the stable, and let him stand uncared for over night, even for an hour, the sensitive skin is rapidly chilled by the evaporation of the sweat, the pores are suddenly closed, and often a cold, a rheumatic stiffness or other disorder results. Proper grooming prevents this, by toughening the skin, keeping it in healthy action, equalizing the circulation, removing obstruction from the pores, and what is of great importance, by rousing the action of the muscles at the surface, in some measure, compensates for the want of exercise consequent upon stable life.

Currying and brushing should not be done in the stable; the dust and scurf will be scattered in the manger to mix with the horse feed, besides keeping the stable uncleanly. Take the animal into the open air, tie him securely, and handle him so gently that he will enjoy, rather than dread, the application of the comb and brush. A sharp currycomb, roughly scraped over the tender skin, is anything but pleasant, as the shrinking and resisting animal will soon show. Apply this instrument lightly, and depend mainly upon the free use of the brush. Begin at the head, and pass the comb lightly up and down, until the dandruff is all loosened, and remove it with the brush. Be particular around the edges of the fore-top, and the mane. It is a good plan to sponge off the head and ears, using but little water, smoothing the hair down to its natural position. In going over the back, quarters, loins, etc., use the comb in one hand and the brush in the other, working lightly and quickly. Take much pains where the skin lies in folds, as at the union of the legs with the body—let every part be made thoroughly free from dust and dandruff. Finish by rubbing down vigorously with wisps of straw, until the hair "shines like a bottle"—an extra smoothing touch may be put on with a woolen cloth. Do not fear all this trouble ; it will be more than repaid in the extra looks and spirit of the horse. E. H.

Sheep Husbandry....I.

One of the most delightful and profitable branches of husbandry is the care of sheep. Owing to the mixed husbandry which the circumstances of the country force upon most of our farmers, it is rarely made a specialty. With the exception of Texas, and some other parts of the Southwest, where pasture lands are very cheap, it occupies a subordinate place. In many of the older States, the flocks of sheep have been on the decline for the last thirty years, and many farmers do not keep them at all. In the age of homespun, sheep were a necessity, and had a place upon almost every farm. Farmers and their families for the larger part of the year, were clad in cloth made from their wool, manufactured at home. It was a very important part of domestic industry, and the females of the household spent several months each season in carding, spinning, and weaving the wool of the flocks. With the introduction of woolen manufactories, and the cheapening of woolen fabrics, all this has passed away, and the spinning wheels and looms, whose music enlivened all the Winter months, have been banished as useless lumber to the garret. We have been in a sort of transition state for the last thirty years, from the age of homespun to the age of manufactures. The want of adequate protection on woolen fabrics, has rather discouraged our own manufacturers, and led to large importations. Farmers having no longer a use for their wool at home, and no large demand for it at the factory, have diminished their flocks and put their capital into other branches of husbandry.

Latterly, however, a new interest has been awakened in sheep, and there are clear indications of a revival of wool-growing in the older States. Our manufactures are beginning to compete with the imported articles, and there is a larger demand for our fleeces. As the cities and villages increase in population, there is an increased demand also for mutton, and many make this a leading object in their selection of stock. The South Downs and their crosses are kept exclusively in some sections, and the butcher comes for fat lambs and wethers to the farmer's door, almost every month in the year. On farms well adapted to sheep grazing, and in the vicinity of good markets, they are found to be highly profitable. The increased interest taken in sheep, calls for a new discussion of this department of husbandry.

SHEEP WASHING.

Beginning with the business which is appropriate to the season, we offer a few hints upon this topic. The object of the washing is to remove the filth which accumulates in the fleece during the Winter and Spring, and the gummy material or yolk which exudes from the skin, and is retained in the wool. The cleansed fleece properly folded, presents a more inviting appearance to the purchaser, and commands a better price for being in good condition.

In this latitude and further north, the water is not usually warm enough for washing until the month of June. A certain degree of warmth is not only demanded for the comfort of the washer, who stands in the water, but for the proper cleansing of the wool. The yolk dissolves much more readily in warm water. The best time for washing is just after a copious rain, to which the sheep have been exposed. The more common method is to select a clear swift running stream, three or four feet in depth, so that the sheep can not touch bottom and hinder the washer. If there is fall enough in the stream, it will expedite the washing to have two dams, the lower one furnishing a standing place for the washers, and the upper one furnishing a stream of water, and running from a trough with a fall of two or three feet. If the sheep be held directly under this jet of water, it will cleanse the wool very rapidly.

Prepare a pen at the edge of the stream, so that escape shall be impossible, and so large that it will accommodate all the flocks without giving them much room to run around when they are wanted for washing. It is a matter of a good deal of importance, that they should not be heated when they go into the water. Let them be driven slowly to the stream, and kept as quiet as possible in the pen. Many of the colds which sheep contract at this season, are owing to the neglect of this precaution. In handing the sheep to the washers, catch them by the head and neck, never by the wool on the back. If the sheep are not too heavy, they can be lifted in the arms ; if ver large, take them by the fore legs, in passing them into the water.

The washer should take the neck of the sheep upon the inside of the elbow, keeping the nose out of the water while he presses the wool vigorously with both hands. The washing is to be continued until the water flows away clear from all parts of the fleece. When clean, they should be carefully conducted to a place of easy ascent, and the owner of the flock should receive them at the edge of the stream, and see if the washing has been thoroughly done. They should be made to stand still after they get out, until the most of the water drains from the fleece. Care should be taken not to drive them along dusty roads. To avoid this, it is a great advantage if the washing can be done at some stream on the farm, or near the sheep pasture. If this can not be done, a day after a rain should be selected, when the dust is laid. After washing, they should be kept in the freshest pasture, free from dirt and briers, until shearing.

Though there is not much danger of taking cold in standing in the water at this business, for two or three hours at this season, still some prefer to keep the person dry. This may be done by sinking a hogshead with one head out, in the stream where the washing is to be done. The vessel is confined in its place by heavy stones upon the inside, and the sheep is brought along the outside, while the washer stands within, and wets only his hands and arms.

Others accomplish the same thing, by making a dam, and running a flume out from the top ten or twelve feet long, and about two feet square. The top of the flume should be just high enough for the convenience of the washer. The sheep, in this method, are best managed by two individuals, one standing upon each side of the flume. With a good head of water, the cleansing may be very rapidly and thoroughly done in this way. In a week or two after the washing, depending somewhat upon the weather, the yolk, which is a kind of natural soap, will again be diffused through the wool, and give it that desirable softness which indicates the proper time of

SHEARING.

The clipping of the wool, though a simple process, is an art in which one can attain skill only by practice. In most neighborhoods where sheep are kept, there are persons who make a business of shearing while the season lasts, and it is generally good economy to secure them at advanced wages. Green hands are apt to cut the wool uneven, and to hack the skin of the animal badly. It is desirable that fair weather should be selected for this work, as the sheep ought to be dry and clean ; a condition quite impossible in rains. Scrupulous attention to cleanliness will materially affect the market price of the wool. If the barn floor be selected for the shearing, as is usual, start the dirt out of the cracks in the floor, with a few blows of the flail, and sweep out clean. Sweep up after every fleece is taken off.

After the sheep are yarded, put a few at a time into a clean pen or stable, adjoining the barn floor or place of shearing. If several shearers are employed, a man should be on hand to catch the sheep for them, to cut off long toes and troublesome horns, and to mark them when they are shorn. In shearing, begin with the head and neck, then the legs and belly, leaving the sides and back to the last. The main thing is to shear evenly, closeness being a minor consideration ; as what is left, adds so much to the length of the next fleece. Great care should also be taken to avoid clipping the wool a second time, and the cutting of the skin. Shearing brings to light the management of the sheep for the past Winter. If this has been good, the undressed animals will look sleek and round without the fleece. If otherwise, the projecting ribs and hip bones will stare the husbandman in the face. The appearance of some of these neglected flocks when shorn, especially if they have had unskillful shearing, is a most ghastly spectacle. The work of starvation begun by the farmer, is not unfrequently finished by the crows.

The folding of the fleece is a matter of considerable importance to seller and purchaser. It should be kept as unbroken as possible while shearing, and if the matter have not been previously attended to, all dirty and clotted bits of wool should be removed. Provide a table of the length of the longest fleeces, and three or four feet wide. A door put upon two barrels will answer, if the door is smooth. Spread the fleece upon the platform, sheared side downward, and crowd the wool together as closely as possible. Put all the scattering locks of clean wool at the ends, then fold over the sides so that the package when done up, will be from one to two feet long, according to the size of the fleece. Then fold over the fleece so as to make a package as nearly square as possible, leaving the wool upon the back, on the outside. The objection to rolling is, that it opens the staple too much. Tie with a stout linen twine passed around the bundles once or twice in opposite directions. The wool, if it be not sent immediately to market, should be stored in some tight building or loft, where it can be kept free from dust and moths. It loses nothing in weight by keeping a few months. The yolk will preserve it from insects.

Though wool can be kept over, if prices do not suit, it is generally the best course to sell as soon as prices are settled. The loss of interest upon the money is considerable, and the prospect of higher prices the second season, can never be made certain. Though some farmers shear without washing, it is a filthy practice, and too expensive for good flock masters to indulge in. The purchaser will insist upon making his own estimate for the deduction on account of dirt. Clean wool will bring the most clean money, and the farmer should seek to establish his reputation for a good article put up in *the best condition.* Eschew all tricks, and let the inside correspond with the outside of the fleece.

* * *

What Shall be Done with the Dogs?...II.

MASSACHUSETTS DOG LAWS.

It is a cheering fact that the Legislatures of several different States have answered this question satisfactorily during their recent sessions. It is a matter of general congratulation that efficient means were adopted by the Massachusetts authorities to limit the ravages of the cattle disease as noticed in another article, but the dog nuisance is almost as crying an evil as "pleuropneumonia," would have become. Since our recent agitation of the subject we have been receiving statistics and isolated facts enough to convert the greatest friend of the canine race to an uncompromising enemy. Again we say legislate the dogs out of the way of sheep raising.

We are indebted to Chas. L. Flint, Esq., Sec. of the Massachusetts Board of Agriculture, for a copy of the Dog Laws of that State now in force.

Protection of Sheep, Lambs, and other Domestic Animals, against Dogs.

Sec 52. Every owner or keeper of a dog shall annually on or before the thirtieth day of April, cause it to be registered, numbered, described and licensed for one year from the first day of the ensuing May, in the office of the clerk of the city or town wherein he resides ; and shall cause it to wear round its neck a collar distinctly marked with its owner's name and registered number, and shall pay for such license one dollar for a male dog, and five dollars for a female dog.

Sec. 53. The clerk shall issue the license, and receive and pay the money therefor into the city or town treasury, retaining to his own use ten cents for each license. The treasurer shall keep an accurate and separate account of all sums received and paid out under the provisions of this chapter relating to dogs, which account shall at all times be open to the inspection of any voter of the place.

Sec. 54. The clerk shall annually, within one week after the first day of May, post in some conspicuous public place a list of all dogs licensed for the current year ; and shall furnish a copy thereof to the chief of police of the city, or one of the constables of the town ; and shall also, from time to time, furnish said officers with a list of such dogs as are subsequently licensed during the year.

Sec. 55. Any owner of a dog may at any time have it licensed until the first day of the ensuing May, upon paying the sum as provided in section fifty-two ; but such license shall not exempt him from the penalty of the following section, on complaint made prior to issuing the license. No new license for the current year shall be necessary upon the removal of a licensed dog into another city or town, unless required by some by-law passed under section sixty-seven.

Sec. 56. Whoever keeps a dog contrary to the provisions of this chapter, shall forfeit ten dollars, to be recovered by complaint, to the use of the place wherein the dog is kept.

Sec. 57 Whoever wrongfully removes the collar from or steals a dog, licensed and collared as aforesaid, shall be punished by fine not exceeding fifty dollars ; and whoever wrongfully kills, maims, entices, or carries away such a dog, shall be liable to its owner for its value in an action of tort. Whoever distributes or exposes any poisonous substance, with intent that the same shall be eaten by any dog, shall be punished by fine not exceeding fifty nor less than ten dollars.

Sec. 58. Any person may, and every police officer and constable shall, kill or cause to be destroyed all dogs going at large and not licensed and collared according to the provisions of this chapter ; and such officers, when not otherwise paid for their services, shall receive from the city or town treasury fifty cents for each dog so destroyed by them.

Sec. 59. Every owner or keeper of a dog shall forfeit to any person injured by it, double the amount of the damage sustained by him, to be recovered in an action of tort.

Sec. 60. Any person may kill a dog that shall suddenly assault him while he is peaceably walking or riding without the enclosure of its owner or keeper ; and any person may kill a dog that is found out of the enclosure or immediate care of its owner or keeper, worrying, wounding, or killing any neat cattle, sheep or lambs.

Sec. 61. If any person so assaulted, or finding a dog strolling out of the enclosure or immediate care of its owner or keeper, shall, within forty-eight hours after such assault or finding, make oath thereof before a justice of the peace or police court for the county, or before the clerk of the city or town where the owner of the dog dwells, and shall further swear that he suspects the dog to be dangerous or mischievous, and shall give notice thereof to its owner or keeper by delivering him a certificate of such oath signed by such justice or clerk, the owner or keeper shall forthwith kill or confine it ; and if he neglects so to do for twenty-four hours after such notice, he shall forfeit ten dollars.

Sec. 62. If, after such notice, the dog is not killed or confined, but is again found strolling out of the enclosure or immediate care of its owner or keeper, any person may kill it.

Sec. 63. If a dog, after such notice to its owner or keeper, shall by such assault wound or cause to be wounded any person, or shall worry, wound, or kill any neat cattle, sheep or lambs, or do any other mischief, the owner or keeper shall be liable to pay to the person injured thereby treble damage, to be recovered in an action of tort.

Sec. 64. Whoever suffers loss by reason of the worrying, maiming, or killing of his sheep, lambs, or other domestic animals, by dogs, may, within thirty days after he knows of such loss, present proof thereof to the mayor or selectmen of the city or town wherein the damage is done ; and thereupon said officers shall draw an order in favor of the owner upon the treasurer of said city or town for the amount of such loss. The treasurer shall register such orders at the time of their presentation, and annually on the first day of January pay them in full, if the gross amount received by his city or town under the provisions of this chapter relating to dogs, and not previously paid out, is sufficient therefor ; otherwise he shall divide such amount *pro rata* among such orders, in full discharge thereof. After such order has been drawn, the city or town may, in an action of tort, recover against the keeper or owner of any dog concerned in doing the damage the full amount thereof.

Sec. 65. The owner of sheep, lambs, or other domestic animals, worried, maimed, or killed by dogs, shall have his election whether to proceed under the provisions of the preceding section or of sections sixty-one, sixty-two, and sixty-three ; but having signified such election, by commencing a suit or obtaining an order, he shall not have the other remedy.

Sec. 66. The mayor and aldermen of each city, and the selectmen of each town, shall require all dogs not licensed and collared according to the foregoing provisions, to be destroyed, and shall enforce all penalties herein provided. Any officer refusing or neglecting to perform the duties herein imposed upon him, shall be punished by fine not exceeding twenty-five dollars, to be paid into the city or town treasury.

Sec. 67 The city council of any city, and the inhabitants of any town, may make such additional by-laws and regulations concerning the licensing and restraining of dogs, as they deem expedient, and may affix any penalties, not exceeding ten dollars, for any breach thereof ; but such by-laws and regulations shall relate only to dogs owned or kept in such city or town ; and the annual fee required for a license shall in no case be more than one dollar in addition to the sum required by section fifty-two.

Sec. 68. All fines and penalties provided in the sixteen preceding sections may be recovered on complaint before any police court or trial justice in the county where the offence is committed.

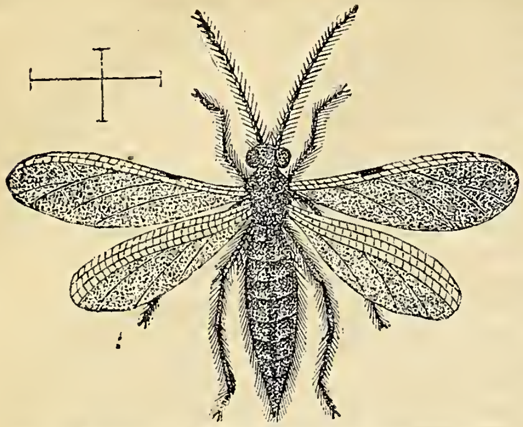


Fig. 1—Prolific Lace wing Fly, (*Hemerobius Numenia*), magnified—The cross lines on the left show the natural size.

Microscopic Views of the Insect World. IV.

BY MRS. CHARLOTTE TAYLOR.

THE PROLIFIC LACE WING FLY.—*Hemerobius Numenia.*

It is one of the greatest accomplishments in life to be able to distinguish our true friends among our acquaintances, much more is it to be able to succor and protect the beneficial and serviceable creatures with which the Divine Creator has surrounded us—I was grieved beyond measure the past season, to see a man standing, knife in hand, very industriously scraping something from the leaves of a Dahlia plant.

"What are you doing!" I asked.

"Scraping off these long-stemmed things," he answered, "they hatch the ugliest little lice, that eat the leaves, spoiling every plant I have."

"You are wrong," said I, "they are the very salvation of your plants, "these," pointing out hundreds of Aphides—"these destroy your plants, the others are placed here to relieve them of this destroyer." "Pooh!" he replied, "I know better; every year I do the same thing, and this is the reason I have a few Dahlias left, otherwise I should have none." I bowed and passed on. I am fearful there are many like him, and if this little treatise can stay the hand of one such barbarian, what success!

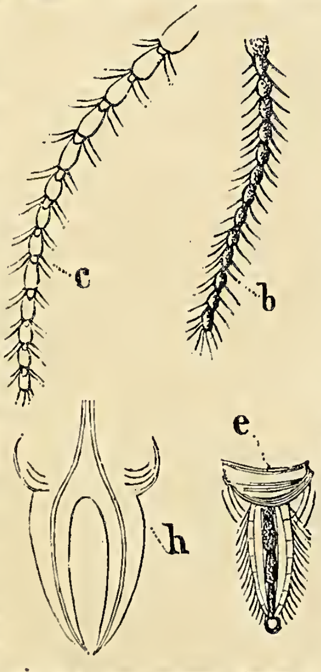


Fig. 2—*b.* The Antennæ, always 13 jointed—*c.* Antennæ of the second fly—*e.* The Ovipositor (egg-tube) concealed within—*h.* The Mandibles or jaws.

The Hemerobius Numenia is so called from its eggs being found *newly* deposited on the Apple tree, Dahlia, honey suckle, and various other plants, from June to October, and far into November if the season be mild. The Hemerobii belong to the second family of the Neuroptera. The perfect insect or Imago, has splendidly metallic colored eyes, globose and very prominent, which have obtained for all this family the name of the "Golden Eyed Fly." The body is long, antennæ moniliform, (resembling a necklace), the wings nearly equal in size, not folded, bent down, beautifully divided into meshes finer and more transparent than any lace, which gives them another name, the "Lace wing fly." The tarsi or feet, have five joints, the mandibles are masticatory or fitted for cutting food. They have a peculiar smell, to many persons very disagreeable, which I think can be traced to the decomposition of vegetable juices required by the female to manufacture the glutinous liquid she needs when depositing her eggs. The males of this family have little or no scent, and what they have, seems to be obtained from their companions. The one before you, Fig. 1, is very much distended with eggs; she had deposited a great number before she was caught—they are generally very slender.

This is not a pretty specimen, her eyes are very brilliant, however. She is hairy, in some lights has a dull yellowish color, then again she is all black. She has no spots on her wings, except one at the stigma; (a small dark spot seen on the upper side of the wing, fig. 1); the costal nervure—(the horny rib running along the upper side of the wing,) is peculiarly strong; the veins are all a very dark green, almost black. In a good light you may perceive a dark line descending in a point on the thorax.

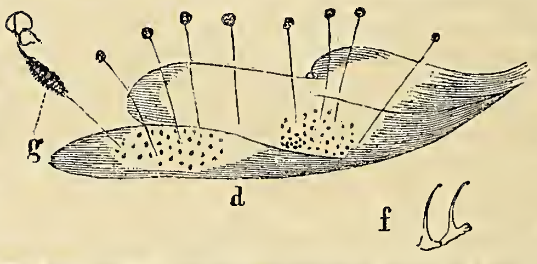


Fig. 3—*d.* Leaf with eggs on their supporting threads.—*f.* Single eggs.—*g.* Newly hatched Larva descending.

Six years ago, this fly was abundant on apple trees and other plants in Massachusetts. I never met with it again until June of last year. On the same plant from which this was taken, a leaf was obtained, on which were two cocoons, from one of which partly emerged another genus—its wings were never unfolded, it died in extricating itself. I give the antenna, *c*, Fig. 2, on account of its singularity.

The manner in which she deposits her eggs, has puzzled authors for a long time, but the process is simple when you can observe the insect. She touches the under part of the leaf with the points of her abdomen; the glue, which is very much thicker than that of other insects, is dropped on it from two tubes on each side of the oviduct (egg tube); she then elevates her body until it forms an angle with her head. The thread by which the egg is attached to the leaf, Fig. 3, I have always noticed is the length of the fly's abdomen; some being very short, others very long, consequently you can tell by the length of the thread or foot stalk on which the egg is placed, whether the fly will be a large or small specimen—I merely give this as my experience, I have never known it to fail. If you look at these stalks, *f*, fig. 3, you will see that from the globule of glue, two threads spring out, which unite into one, and when her abdomen has attained all the elevation she is able to give it, an egg descends from the oviduct and is placed thereon, so firmly attached, no storm of wind or rain can disturb it. You ask the question why is this done? She understands this beautiful provision of nature.—She knows her own children or larvæ are greedy, carnivorous creatures, devouring every thing in the shape of egg or larvæ, and would suck up their brothers with the same *sang froid* they would their own natural food, the Aphides, thus you perceive, placed on these high stalks, they are safe from these fierce but valuable little creatures. As soon as hatched, the larva crawls down into the midst of its garden of Eden, a whole field of aphis eggs, or any others belonging to the insect kingdom. It now rests for an hour or more, sometimes two days, according to the weather, when the first skin bursts, and out walks a personage which will make an impress on his or her age. No time is lost, every egg near by is sucked by its long sickle jaws, and the "slaying of the innocents" is enacted with terrible fidelity. The jaws are as simple as possible in construction, two long bent pieces of hollow horn, with tubes running down them, which unite into one, passing through the entire body, nourishing every part most affluently. Indefatigable industry, and an insatiable appetite, render it to us, if cherished and allowed its own way, a member of the most valuable family of insects we have in this country, and which is apparently augmenting every season—the new genera seem inexhaustible.—The larvæ likewise of every other insect are acceptable to them, even the troublesome inch worms (the Geometridæ) fall victims to their gormandizing proclivities. They are found scattered on every plant, at some seasons much more numerous than at others, and we can not conceive the immense obligations we owe these insects, in garden, orchard, and field. The larva is, I allow, exceedingly ugly indeed—I confess more, the very ugliest in the kingdom, except that of the dragon-fly, one of the same family. They are of various colors. The one here represented, Fig. 5, was of a pale sickly greenish color, with two lighter spots on the three segments on which the dumpy awkward legs are placed. The legs have black hooks on the last joints, enabling them to move quickly, and to hold on very firmly when the wind is high, by passing them through the long hairs with which all leaves are more or less clothed. It is covered on the body with short black hairs, and small black dots, its antennæ filiform (thread like). The eyes are very conspicuous, but have none of the brilliancy of those of the perfect insect. After it has studied murder in an artistic and practical light long enough, and can gormandize no longer, it is swollen to an enormous breadth, and must rest, sometimes three days, I suppose to allow the juices of its body to

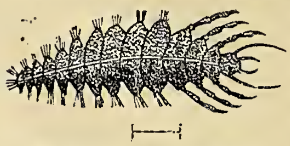


Fig. 4—Larva ready to spin.

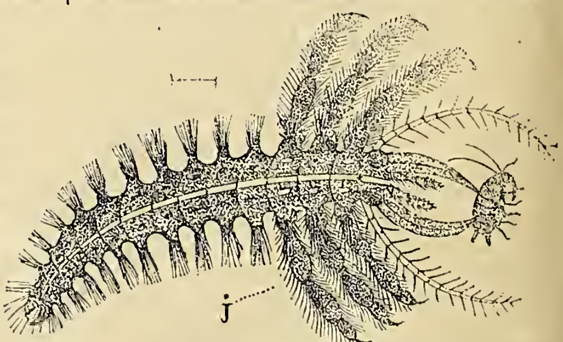


Fig. 5—The Larva attacking an aphis.

concentrate themselves, and it then soon becomes ready to spin its cocoon. It is shown at Fig. 4.

The one here represented, began his in an extraordinary manner, whether it is the usual way or not, I am not able to say. All the others I have seen operate, were in confinement. The end of a leaf was caught between his fierce jaws, (see Fig. 6.) his tail began to move back and forth in a most violent manner, until a little cloud of fine silk in a half circle was evolved. I am under the impression this mode is adopted until much of the fluid has passed from the body, and the skin is loosened so as to allow freer action. With a spring that you would suppose might have knocked him into "next Summer" he brought himself flat on his back upon the leaf, the silk floating over him, which was soon gathered up and fastened to the leaf. Within, he lay gazing at his tail, watching it as it moved to and fro—at last the silk became so thick, no more of his manœuvers could be seen; at the end of two days all was still within. The pupa (fig. 7) is what may be termed necromorphous, changing within the sack formed by the larva; its parts are very distinctly seen; the large eyes protruding, the wings folded up into the smallest space conceivable. It is one of the most wonderful circumstances in nature, how it is possible for these comparatively large flies to emerge from a ball of such small dimensions. The pupa case in the interior is so stout, it resembles paper—exteriorly, it is slightly woven as a cocoon. The ends of both the pupa case and cocoon at one extremity, are left, if not open, yet so loosely confined, that the fly when ready to emerge, works its way out with ease. But the labor is not over yet, it is still enclosed in a very thin covering, from which it must emerge before it becomes a perfect insect. At this stage many of them die exhausted in the struggle for life. They are beautiful—all that are known to us as yet; their wings and eyes are always exquisite, even if their bodies are dark. But the ugly larva! Can any thing be more explicit, than that Nature does not always make the most useful, the most beautiful? How true then it is that

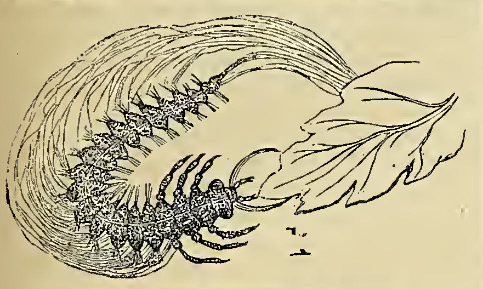


Fig. 6—Larva commencing its cocoon.

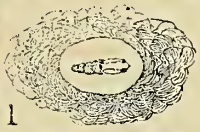


Fig. 7—Cocoon, Pupa case and Pupa.

"The Useful is the Beautiful, the good and kind and true,
To feature and to form impart their own celestial hue."

* * *

A Caterpillar for a Pet.—If any of our readers who have now an utter aversion to every species of worm, will, during this month, find one of the largest specimens, such as they would term the *ugliest*, put him in a secure place, supply him daily with such leaves as he likes, and minutely observe his changes as they occur, they will soon become interested, and derive pleasure from what was disgusting before. A paste-board box, containing a little earth, with a gauze cover to admit air, will answer every purpose. In this, the pet caterpillar will cast his skin, weave his winding sheet, change to a winged insect, and come out in a beautiful dress, and thus reward you for your trouble.

Blinks from a Lantern......XX.

BY DIOGENES REDIVIVUS.

A GRAND EXPERIMENTER.

It is sometimes said, that we can not have too much of a good thing. Our friend Higgins is very much of this opinion, and notwithstanding his somewhat melancholy experience in importing rare breeds of swine, feeding beeves on turnips exclusively, and making his fortune on a thousand hens in one inclosure, he still perseveres in the pursuit of knowledge under difficulties. In all my lamp-lighted exploring tours, I have never found a man that showed so much courage under overwhelming defeats. One should have thought that the long pickerel nosed sow, with her alligator brood, would have shocked his nervous system so severely, that he could never look upon swine's flesh again without convulsions. Not so with Higgins. He has indeed done importing from across the waters, but Isaac Stickney's best are now in his pens, and you will find Higgins on any Saturday morning when he gets home from the city, surveying the stubb nosed Suffolks with the greatest complacency. He now claims that the nose is the grand hinge on which all future improvements in swine must turn, that the ham is always in inverse ratio to the snout. He thinks he has now settled it beyond controversy, that swine are available for pork, just according to the shortness of the nasal protuberance. Accordingly he offered a premium last Fall, at the County Agricultural Society, for a swine that should have a shorter snout than his boar Pericles.

A shrewd Yankee, by the name of Hogg, immediately put a pig in training for the prize. At two months old, the snout was bored with two wires, and strapped firmly behind the ears, so that it had as poor a chance to elongate as the foot of a Chinese beauty in bandages. A funny pig was put on exhibition at the fair, and Mr. Hogg won the prize by one fourth of an inch over the Boar Pericles. Higgins, not being in the secret of the training, declared that he never paid over a "V" with more satisfaction. What sort of progeny will come of this training remains to be seen—it is an interesting problem.

Last Fall, Higgins was a good deal exercised on raising wheat. He read up the authorities on this subject, and came to the conclusion, that ammoniacal manures were the one thing needful for the wheat crop. The papers recommended stale urine as a steep for the seed. This was certain to kill all the eggs of insects, and to remove smut. The thing looked reasonable, and Higgins saved a barrel from the manure gutters in the barn, and soaked his wheat in it for two days. He noticed that the kernels were remarkably swollen, and a little soft at the sowing, but suspected no evil. He put in the seed in September, and looked with confidence to see the rank green spires starting in about a fortnight. Not a blade was visible. Three weeks went by, and nothing but weeds began to start. What could it mean? He dug down in several places, and found the kernels a mass of moldy paste. Stale urine had indeed killed the insects, but the wheat went with them. He lost ten bushels of wheat, that cost him eighteen dollars, to learn the difference between wetting seed in urine, and soaking it two days. "Valuable knowledge even at that price," said Higgins, pocketing the loss and the wisdom with the calmness of a philosopher.

Higgins is something of a fruit grower, that is to say, he attends the meetings of the American Pomological Society, and reads the biennial report of that exemplary body. He also takes Hovey's Magazine, the Horticulturist, and divers other journals, that treat of rural affairs. In an unlucky hour, he read of coal tar as an infallible remedy against the borer, and against rabbits, and all other animals that gnaw the bark of trees. Now Higgins had suffered a good deal from the apple worm, and it was only by the utmost vigilance, scraping and cutting out twice a year, that he had been able to save his young orchard, a plantation of five hundred trees. This labor was irksome, and gave him a back-ache at least twice a year. He read of coal tar in one of these weary seasons of borer hunting, and it seemed a god-send. He took it for granted that tar was to be applied to the bark, and, with swab in hand, daubed on the hot liquid. The deed was done in Spring, when the trees were full of sap, and they did not immediately begin to wither; but as the Summer came on, the trees suddenly stopped growing, and assumed a sickly hue. Not a dozen of them escaped the grand experiment. The trees had been out four years, and had cost him over a dollar a piece in money and labor, to say nothing of the loss of time. Two hundred dollars were sunk in a single experiment, to teach him that coal tar should be applied to canvas, and not to the bark of fruit trees. "Rather expensive," exclaimed the philosophic Higgins, "but there is no great loss without some small gain. Oven wood will be cheap and plenty."

It is quite manifest from the example of Higgins, that not every man is qualified to conduct an experiment with safety to his own pocket. It is not strange that so many cultivators of small means are backward in trying a new method, or a new crop. Many of them have been bitten, and instead of learning carefulness, have learned stupidity. They dread an experiment, as a burned child dreads the fire. They have learned but one way of raising a given crop, and the operations of one year are as much like those of another as is possible. They become strictly routine farmers, applying as little thought to their labor, as their beasts of burden and draft.

It is also apparent that very much greater care is needed in recording experiments. Not half the records published, give us all the details necessary to enable an intelligent cultivator to repeat the experiment with safety to his animals, or his crops, as the case may be. Important particulars affecting the result essentially, are omitted. It is clear enough to every one who has studied vegetable economy, or who has experimented, that hot coal tar applied to the bark of trees will kill them. But not one in a thousand of our cultivators have made the experiment, and a loose statement like that which entrapped Higgins, is likely to destroy many valuable orchards, and to sacrifice hundreds of thousands of dollars.

Such mischievous articles are circulated and read more extensively than they were ten years ago. It is the fashion now, with both religious and secular journals, to have an agricultural department, and the agricultural exchanges are put into the hopper of the office editor, who possibly knows a cabbage from a carrot, and the grist comes out good, bad, and indifferent. There is little discretion in the scissorings, and the agricultural column, though publishing much valuable information, sows broadcast the seeds of error in thousands of families that are never visited by a reliable agricultural journal, and thus *all* agricultural literature has come to be undervalued. If there is any thing for which farmers can afford to pay the highest price, it is for sound, well defined teachings in husbandry.

How Shall I become a Farmer?

This question is frequently asked of us personally and by letter. The inquirers are of many different classes. Mechanics tired of confinement in close workshops, look to the green fields, and long for the freedom of the plowman. Citizens who have accumulated enough for a moderate income, find themselves straitened by the expensiveness of city life, and see in the economy of rural habits a remedy for their perplexities. With bread from their own fields, butter from their own dairy, chickens from the poultry yard, and vegetables fresh from the garden, at only the cost of raising, they could afford to fare sumptuously every day, and as for the purple and fine linen, that need not be worn in the country. The school-boy too, who has spent the happy weeks of his Summer vacation in frolicking over the hay field, scampering through the woods and feasting on bread and milk, is charmed with the idea of being a farmer, and enjoying the pleasures of the country the whole year round. From all these and many more, the question has come, "How shall I become a Farmer?"

First, a word of caution is needed. Though country life is desirable, it is not all a round of pleasure; though its gains are reasonably certain, they are yielded only to patient, continued *hard work*. The plowman sweating in the blazing sunshine, envies the mechanic in his shop; the economizing farmer sighs for the quick returns enjoyed by his fortunate city acquaintance, and the weary boy who follows the cart with his rake, would often gladly exchange his lot for that of the schoolboy who wants to be a farmer. Hundreds are every year deluded with mistaken notions of the pleasures and profits of farming—they do not count the cost. We fully believe that the benefits are worth the cost, but we are certain that of every ten who leave other avocations for farming, without some previous practical experience of the realities of farm life, nine will meet with discouraging disappointment. The multitude of places for sale at a sacrifice in the neighborhood of all our large cities, by men who have tried the experiment, is proof of the assertion. They met with unforeseen obstacles—the business of cultivation of itself difficult enough, was rendered doubly so to them from want of experience. Crops were put in at wrong seasons and in the wrong manner; the garden would yield weeds as well as flowers, and insects completed the destruction; good help was not obtainable, and the dairy was a failure; and at the end of the year, the accounts properly balanced, would read "Cr. by experience gained, many dollars out of pocket"—more or less according to the extent of the experiment. This too is in addition to the deprivation of many privileges which long habit had rendered necessary to enjoyment. Dark as this shading is, it need not have spoiled the final picture, had it been seen in time and calculated upon. A few years, and steady perseverance even under discouragement will bring all right, and he who would make the change proposed, should enter upon it expecting a period of hard times, then, he will not be disappointed, and may go on courageously to final success. If you can stand the "toughening" process, you can become a farmer, if not—and it will be severe—don't attempt it.

But we will suppose all this has been settled, and a young man knowing little or nothing of farming, has fully determined to go through thick and thin, and make soil culture his profession; how shall he best accomplish it? He needs first practical knowledge of the use of farming implements, and this he can gain by engaging to work as a "green hand" with some intelligent farmer, upon whom he can rely for kind treatment and judicious oversight. The first season, he must be content with apprentice's wages, satisfied if he may receive enough to board and clothe him decently. Let him learn to handle the plow, the hoe, the scythe, and make a business of "getting the hang" of every tool used in farming. While doing this, day by day, let him keep his eyes and ears open to all that concerns the various operations, and not be ashamed to ask even the simplest necessary questions. Occasional leisure moments will be well occupied in studying agricultural periodicals and books. At the year's end he will, if attentive, know wheat from barley, be able to plant and hoe corn, and dig potatoes, to cut a ragged furrow with the plow, and perhaps a raggeder swath with the scythe, in short, will have made a beginning; and if careful, will find his muscles better able to perform the increased labor of the following years. Having in one or more years as may be necessary, thus learned the first steps, let him begin to walk alone, by undertaking something on his own account; it would be well to hire a small field, and arrange for time to work it. Let him advise with others, and then *decide for himself*, as to the best crop and manner of cultivating, and expect but a small return, and he will, when the crop is harvested, have learned more of *management*, than years of merely working for another would have taught him. His progress after this will be easy, if he have studied as well as worked. He may soon, with little aid from others, conduct a farm successfully, working it on shares, or hiring at a stipulated price, and by skill and economy begin to accumulate capital for the purchase of a few acres as a nucleus of his future farm. This is but a mere outline, but sufficient to indicate what may be done by a young man in earnest to become a farmer—with ordinary intelligence he can arrange the details, without it he need not try the experiment. We have not space to pursue the subject further, and illustrate how a man engaged in other business, and having a family, may secure a home in the country which shall give him a livelihood, but may recur to the subject on another occasion.

How to Mow.

A smile wreathes the lip of our veteran farmer, as he reads the heading of this article. Can an Editor teach me anything new in *that* line! Oh no, sir, perhaps not, but let us hint a word or two to your sons, or to some young men who have not such skillful fathers to teach them. We want them to learn this art aright, then they will never forget it.

This is one of the most fatiguing operations of farming, and the more so, as it has to be done in very warm weather. Any hints to lighten the labor will be very useful. In the first place, then, rise early, and begin before sunrise. By doing so, and having your scythe sharpened and in perfect order the night before, you may get half a day's work done by nine o'clock. The coolness of the morning air, and the dew on the grass, will both help along the labor. At nine o'clock, you may retire to the house, or to some shady tree, and rest yourself for several hours, while your slow neighbor is sweating through the mid-day, and perhaps hurting himself by over-work and by taking down large draughts of cold drink to allay his thirst. Between two and three o'clock you may begin work again, refreshed and vigorous, and may labor till sunset with little fatigue.

By all means keep your scythe constantly in good order. Let it be adapted to the surface of the ground to be mowed. If that is level and free from obstructions, the scythe may be long and almost straight, and it will work easy. If the ground is broken, or covered with stones or low stumps, the scythe must be short and crooked.

While the snath should not be too heavy, neither should it be so light as to tremble and shake in the mower's hand: also, let it never become loose from the blade, as this will cause it to catch on every obstruction, and require a great waste of strength to make it cut. Many young mowers, in their haste to get over a certain piece of ground, often worry themselves by this little neglect.

It is very pleasant to mow in company, but young and inexperienced mowers should be careful how they pit themselves against the brawny arms of older and stronger workmen. Many a promising young man has been injured for life by this ambition to be thought a great mower.

Hoping that our young laborers will be careful when following close to each other, we commend them to their noble work, and hope they will pass through the hay-harvest in good health, and gather abundant crops.

For the American Agriculturist.

Experience in Raising Spelt.

In the April No. of the *American Agriculturist*, I notice an article on Spelt, (*Triticum spelta*,) which brought to my mind the fact that my father and neighbors cultivated the Winter variety quite successfully some twenty five or twenty eight years ago, in the southern part of Pennsylvania, (York Co) It was generally sown on soil that was thought to be too poor for wheat, and yielded good crops each year, being much more certain. The plant seemed to be much more hardy than wheat, less injured by freezing out, and seldom injured by the depredations of that arch enemy of the wheat crop, the Hessian Fly, which was so very destructive about that time. The color is a bluish green; it grows nearly as high as wheat, the head about 2½ to 3 inches long, and somewhat closer than wheat. In threshing, the stalk breaks between the grain, leaving the grains enclosed, two by two, in their own husk or chaff, which is somewhat looser, but much thicker than oats; and although Dr. Löbe describes the straw as being softer than wheat, yet to my certain knowledge the contrary is the fact,—in that section of the country the straw being stiffer and harder to cut than the stiffest "blue stem wheat." After threshing, two bushels would generally yield one separated from the husk, which was usually done with the old fashioned shelling mill—viz: a pair of sand stones run loosely together, so as not to mash the grain, with a fan underneath, to blow aside the chaff as it fell from the stones. The grinding and baking were about the same as wheat. It yielded a fine delicious bread, very light and spongy, but of a richer, somewhat more yellowish white, than wheat. The chaff, or husk, after shelling, is very useful for beds, and is much more cleanly and more elastic than straw.

There was considerable raised for several years with good success. The farmers then commenced improving their farms, and the Hessian Fly became less destructive to the wheat, when their attention was mostly turned to that grain, and the spelt almost, if not entirely, abandoned.

My opinion respecting it is, that where wheat thrives well, it will not pay to raise spelt, but where the wheat crop is so liable to fail from a want of snow during Winter, or from any other cause, as in southern Illinois and many other places, it would be a much surer crop.

Brown Co., Ill. WM. W. BOWER, M. D.

Hints on the Root Crops.

We have just fed out the last of our carrots, and the only fault we have to find with them, is, that they are gone. The quadrupeds that have fed upon them, from the horse in the stable to the pig in the sty, coincide in this lamentation. We are sorry that we had not raised two tuns more, both because our neighbors want to purchase, and we want more to finish out the season. We have fed ruta bagas, carrots, sugar beets, and mangel wurzels, and like them all so well, that we shall plant more of them all than we have ever raised before. Each of these roots has its peculiar advantages, and every farmer who has the usual variety of stock upon his farm, should raise them all. All domestic animals crave a variety of food, and will thrive much better upon a half dozen different kinds, than upon any one. They not only eat a larger quantity of food, but it is more perfectly assimilated, and the farmer gets a better return for his fodder, in the growth of his animals, or in beef, milk, or butter.

We have never found any thing to bring out horses and cows in so good condition in the Spring, as a diet partially of roots. They are particularly valuable in the three Spring months, before cattle are turned out to grass. They are full of juice, and are highly relished with the dry hay and meal to which cattle are often confined at this season. They keep the bowels loose, and the appetite in uniform good condition. We have never had the slightest case of illness among animals fed on roots.

The carrot is the best of roots for horses; fed a peck a day with other food, they aid digestion, and keep them in good flesh. We think a diet of hay, oats, and carrots, half and half of the last two, is the best food we have ever tried for horses. They work as well as when fed with hay and oats. Carrots are also admirable for milch cows and for young stock. They increase the richness of the milk, without adding any unpleasant flavor. This objection is brought against a diet of turnips, and for this reason they should be fed to other animals—oxen, fatlings, and young cattle. The sugar beet is more nutritious than the ruta baga or the mangel wurzel, but does not yield so large crops. The mangel gives the largest crops to the acre, sometimes reaching forty tuns. Its keeping qualities are excellent, and it should come in for feeding in the Spring months.

These roots economize land, and should receive a large share of attention from those farmers who live in the suburbs of cities and villages, where land is dear. The yield will vary from five hundred to two thousand bushels to the acre, according to the quality of the soil, and the amount of manure and labor expended upon it. With extraordinary treatment, much larger crops than these are sometimes realized. The land that produces three tuns of hay to the acre, may be made to yield twenty five tuns of carrots, which would have five or six times the nutritive value of the hay. In no way can a farmer get so much valuable fodder upon a given piece of land, as by root culture.

The bearing of these crops upon the compost heap, is a very important advantage. The manure voided by an animal fed on roots, is enormous in quantity, and of very good quality, though not equal to that made by feeding grain and oil-meal. If properly cared for, and mixed with muck under cover, it will take but one season to make a farmer a warm advocate of root crops.

The strongest objection brought against the cultivation of these roots, is the fact that farmers have never tried them. The labor of cultivating, harvesting, and storing, is generally overestimated, and the stereotyped farmer keeps on with his hay and grain. We greatly desire the class of our readers who own small farms, and want to make the most of them, to try roots, even if it be no more than a quarter of an acre. The great thing is to make a beginning, and to see with one's own eyes the enormous quantities of food the soil will yield in roots. Prepare the ground thoroughly, and manure as heavily as for the largest corn crop.

In all latitudes north of this, the first of this month is not too late for sowing the seed. We have for years sown a portion of our carrot seed in June, and got fine crops. The turnips may be sown still later. The beets should not be delayed. Try roots. *

We Want Good Butter.

The dairying season is now at full tide; the milk pails overflow with their foaming treasures, the pans are crowned with rich cream, and golden nuggets of butter are ready for transportation to the market, there to be minted into solid coin. The quantity of dairy products brought to this market alone, would surprise a novice; the quality of much of it is still more astounding. An average of 500,000 lbs. of butter per week is consumed in this city and vicinity; 100,000 lbs. would be a full estimate of the prime article to be found in the whole quantity. The price paid for the best sorts, over the inferior, would seem to be inducement enough to furnish a good article in abundance, but, when purchasing family supplies, we have often sampled and tasted large lots—smelling was enough in many cases—without finding a single desirable firkin. Scarce a country housekeeper would allow such trash to appear on her table; indeed, visitors from the country find the poor butter here, one of the greatest drawbacks to their pleasures at the table. Why then is such butter sent here? From some sections, no doubt, because it *is* poor. A neglected churning is found unfit for family use, and is "sent to the store" in barter for other necessaries; the merchant pays one price to all customers, packs it all, yellow and pale, pure and poor, waxy and greasy, in one firkin; the better quality is soon corrupted by evil communication, and when opened in market, all is thoroughly vile. If country dealers would fix the price according to the quality, much of this would be remedied. Housekeepers have little encouragement to do their best, when a pound of grease, fit only for the soap-maker, buys as much sugar as a pound of good table butter.

Dairymen who produce a really superior article, are often surprised at the small returns received from the distant market. Their neighbors exult in two or three cents more per lb. obtained for the same quality, and sold by the same commission merchant—there must be a mistake somewhere. The mistake is at the dairyman's door. His neighbor procured new firkins or tubs this Spring, has kept them neatly painted, with his name plainly marked in full upon the cover. A grocer or hotel keeper was attracted by the promising look of the package, tried it, found it good, and engaged it for the season—the *brand* was established, and will always sell well while it keeps its reputation. Our less fortunate friend made the old pail answer, marked it with a cross or a notch which *he* would know, and sent it along The weather-worn and rusty pail was overlooked by the best customers; it was set with the second sorts, and sold for second prices, to the joy of the purchaser, and the loss of the economical dairyman. Three cents per pound on thirty weight of butter would pay for a new pail every week.

But the great drawback in the quality of our butter is the want of *elbow grease*. It is not sufficiently worked. It leaves the dairy apparently sweet and fresh, and *is* so for the time, but the ladle or the roller were sparingly used, the buttermilk and sour milk soon become rancid, and five to ten cents per pound loss is the penalty It would be thought a hard law that inflicted a fine of that amount for every pound of poorly worked butter, but the inexorable laws of trade do impose just such a fine; no excuses are received, no penalties remitted, and there is no appeal. But on the other hand, good butter, nicely packed, and carefully forwarded to honest dealers, invariably receives a premium, which we wish all our dairymen would compete for, and part of which we will cheerfully pay.

Remedy for Short Pastures.

Those who have but a limited range of pasture and keep stock enough to crop it well, are almost at the mercy of the weather. If there chance to be favoring rains, and a good season for the growth of grass and clover, all is well; but if, as frequently occurs, there comes a long period of drouth, the browned fields already closely cropped, suffer severely, having little to protect the roots from the full power of the sun, and the cattle suffer yet more. The milk pails show serious diminution, the dairying profits shrink, and the stock fall off when they should be gaining. A severe check of this kind will be felt too throughout the season, for much of the pasture may be "Summer killed," and the full flow of milk can hardly be regained. This may be guarded against by putting in a small plot of corn, sorghum, millet or other suitable crop for cutting and feeding green. An acre of corn sown broadcast now, will very soon yield sufficient to give great relief to the short pasture. It is not necessary to stable the cows; cut a good supply for them, and feed night and morning before they leave the yard; they will eat it with a relish, and make ample returns in the milk pans and the churn. Even if the threatened drouth should not come, and abundance of grass should grow, the soiling crop need not be lost. Cut at the proper season, and properly cured, it will not come amiss next Winter.

What is "Five Finger."

A correspondent inquires what this plant is, the name of which he has often met with in the *Agriculturist*. He is fortunate not to have found it in his fields. It might appropriately be called the hand of poverty, gleaning among poor soils for scanty nourishment which clover or any decent grass would disdain to accept. The botanical name is Potentilla *Canadensis*. It has a branching stem, from three to eighteen inches long, resting on the ground; the leaves are hairy, and spread out in fives like fingers (whence its name) they somewhat resemble strawberry leaves; it bears small, yellow flowers. It comes in where grass starves out, and is a sure index of unthrifty farming. Good manuring, or a top dressing of plaster, or lime will help to banish it.

Culture of Flowers.

Farmers seldom devote much time to planting ornamental trees or to flower-gardens. To clear up the land of its forest trees and stumps and stones, to fence and to manure, these are the great objects of the farmer's life. Trees are sometimes set out, but they are chiefly such as bear fruit. Of course, these fundamental and practical things should be looked after first; but when these have been attended to, why not add other things attractive to the eyes of visitors and to the family, both the young and old? Shade-trees, shrubs, vines and flowering plants make one's house look better and enhance its value.

Let the farmer begin his improvements by making a first-rate kitchen garden. Stock it well with asparagus, rhubarb, currants, gooseberries, raspberries and grapes, and let it abound with beets, onions, lettuce, radishes, tomatoes, melons, and a multitude of other good things which such a garden can be made to yield. The comfort and healthfulness of such a garden will naturally lead on to something else. At least, if the farmer have a sensible wife and intelligent children. he will not fail to gratify them with some flower-beds. At first, it may be only a border next the patch of beets and onions; but with improving taste, he will indulge them with a flower-plot by itself. And pray, what will it contain? Why, of course, those old favorites—lilacs, roses, honeysuckles, flowering almonds, and syringas, among the shrubs; and columbines, larkspurs, monks-hood, pinks, pæonies, foxgloves, etc., among the herbaceous perennial plants; and then will be added any quantity of annuals. Good so far.

And it won't be long before the sensible man will wonder that he had neglected, for so many years, to give his family this source of enjoyment. How happy my wife is of late, he will say to himself, I verily believe she has grown ten years younger; and my daughters, how charming they look with their hair and their bosoms decked with flowers of their own raising? My money-loving neighbors tell me that fine gardens don't pay. Perhaps they don't in dollars and cents, but they do in something far better. The song of the robin don't pay, nor does a fine landscape, nor does the ruddy hue of my boy's cheek and lip, or the kiss of my bright-eyed daughter; but I value them none the less.

Sensible man, you are on the right track. Money-value is not the highest standard by which to estimate many things. Try them rather by their tendency to improve the character, and to promote real happiness. Pure pleasures, cheap enjoyments, those which leave no sting behind, and which add to our knowledge and improve our hearts, are most truly desirable. Let it never be forgotten that our minds receive a bias for good or evil, from the occupations of our hands. And can any harm come from the culture of flowers? What a dreary place would this world be without them! It would be as a face without a smile, a feast without a welcome.”

A BOUQUET OF SUMMER FLOWERS.

How many things in a flower-garden to interest young and inquisitive minds. For example, note the convolvulus closing its petals at the approach of a storm; the tulip and many yellow flowers shutting up in hazy weather; the Mexican tiger-flower, the morning-glory and others open in the morning and shut at noon; the evening primrose open at sunset; the sensitive plant shrinking at the slightest touch; the Fraxinella, in a warm, damp evening, emitting a gas which will ignite if a match is applied, and burn for some time without injury to the plant, etc.

For the man of business, nothing can be more refreshing than the garden. To the student weary with brain-toil, what a relaxation! To the child what a feast of the senses! To the mother, what place more suitable for instructing her household in lessons of beauty and virtue?

Management of Dahlias.

As the first of the present month is an excellent time for setting out dahlias, we will say a few words about their culture. This plant is not fastidious about soils, yet it succeeds best in good garden mold, not very stiff with clay, nor very light and porous with sand. It is a rank grower and feeder, and needs some degree of moisture at the roots in mid-summer. Deep trenching at the outset, and mulching in hot weather, will supply this necessity.

Propagation.—If one has a fancy for raising new varieties, he can do so by sowing seeds. In this way, he will get some flowers the first season, some good, others bad, and indifferent. Only a few out of a hundred seedlings may be worth preserving, but it will be very pleasant to watch their wonderful sporting from a single packet of seeds.

A more common way, however, is to propagate by cuttings from, or divisions of old roots. Set the roots into a half-spent hot-bed, and the buds will soon push out. When they have made a few inches' growth, cut them off close to the tubers, and pot them, and they will grow like any cuttings. As soon as they are well-rooted, they may be transplanted into the open garden. The old roots may be reset in the hot-bed, and a new crop of cuttings obtained. In this way a multitude of plants may be had in one season from a single root. For nurserymen who wish to propagate largely for sale, this is an excellent mode.

Still another method, and the more common one for amateurs, is simply to divide the last year's roots, in the Spring, and set out every tuber that can be got off in connection with a bud at the crown of the root. [And here, let us caution the inexperienced against the mistake of a friend of ours, viz.: roughly breaking off the mere tubers and planting them, but throwing away the neck or crown of the root, which alone contains the buds from which the plants grow!] If the old roots are set in any warm place, the first week in this month, and covered with a little earth, they will soon show their buds. Now, cut carefully between, with a sharp pruning knife, allowing one bud to each tuber. Then, set each piece of root in the garden where you wish it to grow, planting them three or four feet apart, and covering the buds with two inches of soil, the tuber, of course, being deeper.

Previous to planting, prepare stakes, and set them firmly in the ground where the plants are to grow. These stakes may be common cedar poles, six or eight feet long, or they may be handsome stakes of pine, planed smooth and painted green. If one desires to have them very nice, six inches of the upper part of the stake may be painted white, and the name of each Dahlia written upon it. Well turned and neatly painted, hard wood stakes, of different lengths, are kept on sale by most seed dealers.

As the plants grow, tie them to the stakes with bass-matting or any soft strings, continuing this work all Summer, or until the plants are full-grown. If this is neglected, one's plants are quite sure to be broken down by the winds. Only one strong shoot should be allowed to grow on each root, and this should be moderately pruned of its lower and lateral branches. But who will show us how to get rid of the insects which often infest the flowers, just as they begin to expand, eating off the petals, and even boring through the stalks, causing them to break off? Hand-picking is laborious, lime-dust and ashes, and tobacco-water injure the blooms. If one has but a few plants, the flowers may be protected by drawing caps of gauze or lace over them.

In the Fall, after the frosts have fairly killed down the tops, choose a dry day for housing the roots. Dig them up carefully, or you will break off half the tubers. Take them up in the morning, let them lie in the sun and wind all day to dry; then store them away in the cellar, covering them with dry sand.

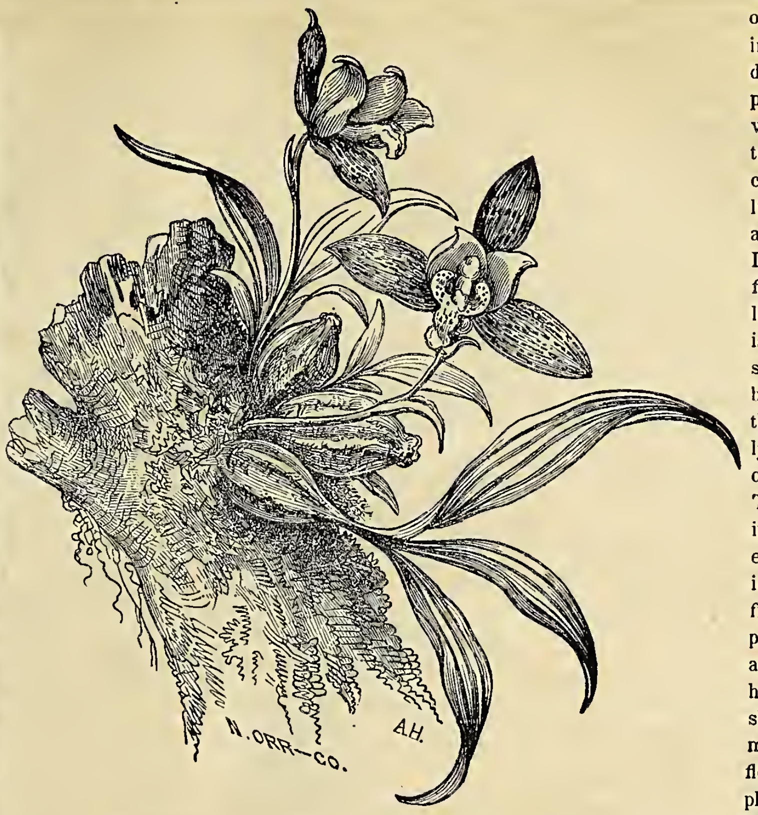
Select list of Dahlias.

From our own experience of several years, with the following varieties, we can earnestly recommend them:

Agnes, pure white; *Aurora*, orange buff; *Admiration*, white, tipped with scarlet; *Beauty of Bath*, fine yellow; *Beauty of the Grove*, salmon, tipped with purple; *Claudia*, purple, tipped with white; *Incarnata*, white, shaded with rosy purple (extra fine); *Grand Duke*, purplish crimson, perfectly globular and a great bloomer; *Douglas Jerrold*, buff, edged with scarlet; *Forget-Me-Not*, crimson, tipped with white; *El Dorado*, fine yellow; *Gem of the Grove*, dark maroon; *Mrs. Hansard*, yellow, tipped with white; *Princess of Wagram*, blush white, edged with deep rose.

Manure for Flower Beds.

Enthusiastic florists will not be over fastidious in the use of materials necessary for their growing treasures, but they may be pardoned for wishing to employ the least offensive substances. We have seen beautiful flower beds much disfigured by coarse stable manure spread upon the surface, and the perfume of the flowers did not always conceal a less agreeable odor. The dark earth found in woods, consisting mostly of decayed leaves and other vegetable matter, is excellent plant-food. It is quite extensively used in green and hot-houses. It is very cleanly, and gives that pleasant mellowness to the soil, so agreeable to the gardener, and so favorable to the plants. For more stimulating manure, dry bone sawings mixed with an equal part of earth, answers an excellent purpose. A solution of guano in water, though rather pungent to the olfactories when first mixed, is not permanently unpleasant when sprinkled upon the ground. A mixture of leaf mold, earth, and bone sawings is on the whole preferable.



Orchids, or Air Plants.

LYCUSTA DEPPII.

The cultivation of this class of plants is rapidly extending in this country. Where they have been introduced they are great favorites: an intelligent nurseryman lately assured us that they will soon supersede very many varieties that have long been standards in the green-house. This he judged, from the constantly increasing orders received, to the comparative neglect of others previously in demand.

They are commonly called air plants, from the fact that their roots in many instances shun contact with the soil, and draw their support from air and moisture alone. The native habitat of most species is in the damp atmosphere of dense woods, or on the banks of streams, in tropical climates. A large collection obtained in the forests of Southern Mexico, was recently disposed of in this city. They are mostly parasitic plants, being found attached to the trunks and limbs of trees. In these situations, they are of course subject to great extremes of weather, being exposed during the wet season to constant drenching, and having to withstand months of Summer drouth.

It is only in the former season that growth is made; they remain torpid the rest of the year, burning summer is winter to them. These remarks are not applicable to all species; and the great difficulty of maintaining an extensive collection consists in the variety of circumstances in which they grow naturally. Each kind must be studied and treated according to its own peculiar habit. Some would drown where others would parch.

We are indebted to Dr. Andrew Knight, for a description of the beautiful specimen illustrated above, the Lycusta Deppii. It was derived by propagation from plants sent by Mr. Deppi, from New Spain, to the Messrs. Loddeges, floriculturists, near London, in 1828, under whose skillful management it soon flowered, and was much admired.

The flowers are very large and beautiful, measuring nearly four inches across. The sepals or outer coverings are three in number, and are of a dull green, spotted with purple. The petals are white, two disposed laterally, and a lower one, called the labellum, or lip, is of a bright yellow, and spotted with purple. In the center of the flower is a column peculiar to all orchids, which is supposed to resemble some living creature, as birds, insects, etc.; by the natives they are highly venerated as favorite offerings in worship. The stem, or scape as it is named more properly, is from five to six inches long, and arises from the base of the pseudo bulb (a protuberance resembling a bulb,) having several distinct sheathed joints, and terminating with a single flower. A fine specimen plant of half a dozen bulbs, bearing from six to eight stems and flowers from each bulb, makes a most splendid display. In June last, a fine plant bearing about thirty flowers, was shown at one of our exhibitions.

This species grows well when fastened firmly on a compost of broken pieces of fibrous peat the size of walnuts; intermixed with moss and broken pieces of flower pots, which permits the water to escape freely, whilst the moss maintains a uniform moisture, and more especially, if put into wire baskets in a moist atmosphere. It prefers a temperature of from 65° to 70° Fahrenheit.

Tritoma Uvaria.

This is one of the newer plants which amateurs will do well to procure. An English authority speaks of it as "the king of all plants for out-doors." Another says: "It is the most beautiful hardy perennial now seen in a visit to the Kew Gardens." It often has from thirty to forty spikes of flowers, from four to six feet high, the petals of a brilliant orange red. Using this as a center plant on a circular bed, and surrounding it with Lobelia grandiflora and golden Calceolaria, is said to produce a fine effect.

Some of our enterprising florists have introduced one or two varieties of it within the past year. The last Report of the Massachusetts Horticultural Society, describes it as follows: "The root of the plant resembles that of the New-Zealand Flax; the leaves are very long, proceeding from the crown of the plant, tough and fibrous, of a dark, clear green, the two edges raised, so as to present a channeled center; from the midst of the crown of leaves proceeds the flower stem, which grows three [or more] feet high, and is often an inch in diameter, very stout and erect. The flowers are produced in a whorled close head, about eight inches to a foot in length, and continue a fortnight or more. * * * * The plant perfects seed freely, and is propagated by seed and by offsets, which are produced from the crown of the plant. * * * This very ornamental and desirable plant is hardy in Eng-

and, with slight protection, but would not probably endure our northern Winters. It should be taken up before frost, and wintered in a greenhouse or light cellar."

A Floral Curiosity.

To obtain flowers of different colors on the same stem (or apparently so,) split a small branch of elder lengthwise, and having scraped out the pith, put into each part some good soil, mixing with it several seeds of different plants, but which bloom at the same time. Then tie the split pieces together, and set them out in a pot or box filled with mold. The seeds will soon germinate, and the plants grow up together with their stems and branches and leaves so intermingled, that to the common observer they will appear to grow from the same root.

Talk at the Gate.

EDGINGS FOR FLOWER BEDS—SPARING THE BIRDS.

John.—Before you go, brother gardener, do tell me why you don't like grass for bordering flower beds!

Gardener.—I have no *prejudice* against it; only, I must say that having tried it a long time, I have at length discarded it, as not quite answering my purpose.

John.—But why? I have tried box, and while it is very neat, don't sucker and spread, as grass does, and is easily trimmed, and has evergreen foliage, I have, after all, condemned it, because with me, in central New-York, it is not perfectly hardy, has to be protected in Winter, and even then, it looks in Spring like a singed cat. Besides, it is so stiff and prim, like a precise old bachelor. I have gone back to grass—not, mind you, to quack grass, nor timothy, nor red clover, but to fine, delicate June grass, cut from the roadside after being pastured close by sheep.

Gardener.—Well, every one to his mind. I have lately used the common Stone-crop, and I like it well. Hardy as grass, evergreen, has no long roots to burrow into your beds and gravel-walks, and needs only an occasional trimming with your spade to keep it in order. It burns out a little in spots in mid-summer, but such gaps can easily be made good.

John.—I must take a look at your borders some day when I have leisure; perhaps I shall learn something to my advantage. Have the birds eaten all your cherries this Summer, or have you eaten the birds?

Gardener's Wife (approaching).—Did I hear you say the birds ought to be killed, because they eat a little of our fruit?

The Men.—No, not exactly so; but then why should'nt they be killed, if they do us harm, as well as the crows and rats and mice? Self-preservation is the first law of nature, you know.

Wife.—But then, the song-birds are so pretty, and so innocent, and sing so sweetly: why not let them take their pay in a few cherries and strawberries?

Men.—Ah, if they were innocent of stealing, or if they only took a little, and of such kinds as we could spare, the case would be different. Dear lady, make a difference here. Some birds steal, but are poor singers, and devour few insects. Others take our fruits, but try to balance accounts by keeping down the insects in our fields, orchards, and gardens. The first set may be shot down without compunction; the latter should be shot at——*without shot!*

Wife.—Glad to see some mercy in you naughty men; but you're a little cruel yet.

Men.—The birds are welcome to the seeds and fruits of all the weeds and briars and bushes that grow in the fields and woods; but when they come to plunder our garden fruits, which cost us so much money and labor, then they become our enemies; they are a nuisance as truly as the crows which pull up the corn in our fields, or the rats and mice who devour it in our barns. We will spare the robins just as long as possible, but when their plunderings become enormous, why then we must blaze away at them. Eh? lady.

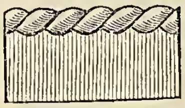
Wife.—I can't hear with you, and can't agree with you; it's barbarous to touch the robin-red-breast.

Men.—Good woman, we'll spare the birds who spare our fruits, as the swallow, blue-bird, martin, wren, and the whole tribe of sparrows; they are our best friends, devouring insects but not fruits.

Wife.—I came out to the gate, to invite you in to supper, but really, I don't want such cruel, bloody men at my table. Good bye.

Men.—Farewell, angel!

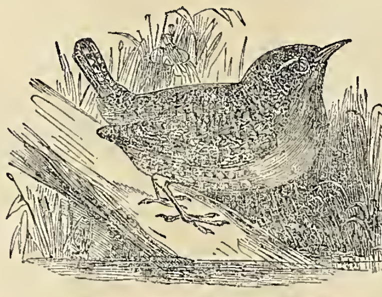
Gardener—Before you go, John, look at this cut which I found in the "Gardener's Chronicle."



It is a proposed substitute for our grass, box and stone-crop, as a bordering for beds. It represents a section of earthen tile, which is much used in England for edging. It is certainly better than bricks set on edge; it can be made for about eight or ten cents a yard.

John.—Really, it strikes me favorably. I wish some of our brick or tile-makers would take this pattern and make some for our gardens. They would be popular.

Both.—Good bye.



For the American Agriculturist.

The Wren.

The American House-Wren, *Troglodytes fulvus* of Naturalists, is different in his migratory habits from the European Wren, which is a constant resident in his native regions, while our House Wren is never seen in the Middle and Northern States during the Winter season. It resides South in cold weather, and in Summer extends its migrations as far north as Labrador, where it also breeds, although it is said to reside and rear its young chiefly in the Middle States; but it is not uncommon in most parts of New-England, and, without doubt, its breeding places are not confined to high latitudes. It arrives with us in May, and returns south as early as the first of October, and as it rears two broods of young in one season, its song is prolonged to a late period in Summer—often to the middle or last of August. The nest of the Wren is built like that of the Blue-bird, in the crevice of an old wall, the hole of a bank or cliff, and in hollow trees; but if you take pains to provide a box or some similar accommodation for it, the Wren can be very easily prevailed on to have its home within the inclosure thus made. The nest is oval shaped, with the entrance at the side, and is generally built of moss, with an inner lining of feathers. The eggs are from six to eight in number, of a pure white color, sparsely dotted with light red. The Wren is an insectivorous bird, its food consisting chiefly of grubs, earth worms, all the insects which are the common food of birds of this class, together with elderberries and other pulpy wild fruits.

In England, the common Wren, and also the golden-crested Wren, are much admired as cage birds. The former, when confined, is lively and engaging, sings loudly, and nearly the whole season, though it seldom lives more than two years. It is not natural for them to be shut up, they enjoy too much the freedom of the woods, and the delightful air of heaven—what bird, indeed, does not?

Writers upon ornithology call this bird one of the most active and restless of the feathered tribe. He is always in motion, and even when singing is constantly flitting about and changing his position, seeming to be in all places at the same moment. His notes are very lively and garrulous, and are more noticeable at noon than any other hour of the day; because, says Mr. Flagg, the general silence that prevails at this hour, renders his voice more distinguishable than at other times. Of the song of the Wren, Mr. Flagg, (Atlantic Monthly, vol. II., page 598,) says: "He exhibits great compass and power of execution, but wants variety in his tones. He begins very sharp and shrill, like a grass-hopper, then suddenly falls to a series of low guttural notes, and ascends like the roll of a drum to another series of high notes rapidly trilled. He is not particular about the part of the song which he makes his closing note, but will leave off right in the middle of a strain, when he appears to be in the hight of ecstacy, to pick up a spider or a fly."

The characteristics of the Wren—a cocked-up tail, and busy inquisitive look—are well shown by the sketch at the head of this article.

Brookdale Farm, Me. S. I. H

Don't forget the Evergreens.

At this season, when all nature is robed in her summer dress, we are apt to forget those trees which enliven the dreary months of the year. Look back a month or two, and all was bleak and brown, except as the evergreens made bright spots here and there. Look forward only a few months, and all will be bare and cheerless again, save where the steadfast conifers hold out and hold on to their verdure. Let us not forget these old stand-bys, these friends in adversity. Plant, if you choose, the gay, butterfly flowers; plant the deciduous trees, whose leaves begin to fade and drop almost as soon as they are fairly expanded; but by all means give large room and plenty of time and labor to the ever-during evergreens.

When a traveler, or visitor of rural tastes, stops at a country-place, he wishes to visit its gardens and ornamental grounds; but where there are no evergreens, there is very little to see, except in mid-summer. Let each proprietor of a house in the country, take pride in having on his place at least a few fine specimens of evergreens, and his home will be an object of interest to himself, his household, and his tasteful visitors, all the year round. He can say to his guests, come when they may, "Let us walk around and look at my noble Norway Spruces, my stately Pines, my graceful Hemlocks," and the guests will be as glad to look at them, as to examine a row of pear trees or grape-vines in summer.

Nor do we plead for them simply on account of their permanency, or their usefulness as screens to break the force of winter winds: they are intrinsically beautiful and desirable. In symmetry of form, richness of color, variety in habit, and, as in the case of some of the pines, the hemlock, Deodar cedar, and some others, in gracefulness, they are hardly surpassed by any other trees.

But we are not strenuous to argue the matter now. Indeed, there is little need of it, for the love of evergreens is spreading almost as rapidly as the mania for grapes, though perhaps not altogether among the same classes. All we now desire to do, is to mention a few of the newer evergreens which are of superior beauty, and which promise to be hardy.

1. First of all, the Nootka Sound Cypress, *Thuiopsis borealis.* It is described in Sargent's edition of Downing, as "a tall evergreen tree, reaching the hight of one hundred feet, with widely expanded branches, very flexible; as it advances, the limbs are covered with small blisters, which, on being punctured, emit a fine aromatic balsam, whence is derived another synonym, *abies aromatica.* It is also found in Russia, near Lake Tschondskoe. It is yet but very new, even in England; our specimens have been out two winters, and are perfectly hardy, as it will probably prove to be in every northern part of the United States."

It stands the winter well at Newburgh, and at Boston. The place of its origin, Nootka Sound, would seem to settle the question of its robustness. We have embellished our own grounds with a specimen of it. Several of the leading nurserymen now advertise it for sale, at the rate of about a dollar per foot high.

2. Lawson's Cypress, (*Cupressus Lawsoniana.*) Of the entire hardiness of this tree north of New-York, we as yet stand a little in doubt, though it has done well for two or three winters at Fishkill Landing, N. Y., at Cincinnati, and at Cambridge, Mass. It resembles the *Thuiopsis borealis* somewhat, but is a little denser in its habit, and a darker green. It has one beautiful trait of the Deodar cedar, hanging down the ends of its leading shoots like ostrich feathers. It was found in northern California and in Oregon. It grows a hundred feet high, and becomes one of the very finest of trees. We very much hope it will prove suitable for our northern climate.

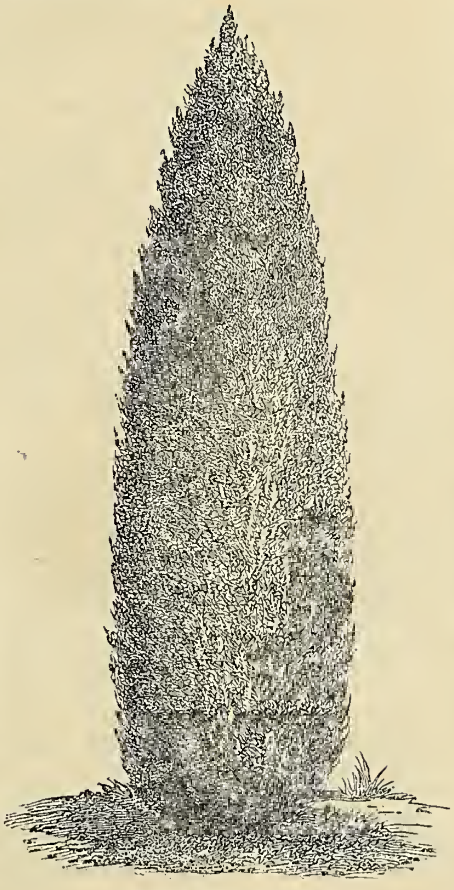
3. Hovey's New Arbor Vitæ. This is a seedling from our native Arbor Vitæ, but as distinct as the Siberian or Chinese. It forms a pyramidal-shaped tree, densely branched, the leaves more delicate than those of its parent, and holding their bright green color throughout the winter. This last is of great importance. Of its hardiness there can be no question. The only doubt is, whether many persons will consent to pay five dollars a plant, which is the price now asked for it. But zealous amateurs will sometimes do very indiscreet things! Sober people will bide their time, and so get their trees cheaper.

4. Siberian Silver Fir, (*Picea pichta*) Of this we have spoken formerly, and will now only say that it is one of the very finest and hardiest of the Silver Firs. Coming from Siberia, it ought to be as tough as a polar bear. It has a soft, full, luxuriant habit, which comforts one to look at. It is a medium-sized tree, seldom getting above thirty feet in hight. We have personal knowledge of its succeeding well, north of Albany.

5 There are several other new conifers that promise well, but of which we cannot now speak with the utmost certainty. Among them is *Picea Nordmaniana*, one of the noblest of silver firs, from the mountains of the Crimea, and promising well as to hardiness. *Pinus Benthamiana* resembles, but surpasses, the Austrian pine in beauty, and bids fair to rank among "the hardies." Frazer's Silver Fir must be suitable for all the northern States, since it has been found wild in northern Vermont. *Abies amabilis, A. Cephalonica, Picea pinsapo,* and several more, promise well. We intend to report upon them from time to time, as we feel assured of their excellence and hardihood.

P. S.—Since writing the foregoing, we have met in Hovey's Magazine, with a report on some of the newer evergreens, from Mr. Harris, gardener on the Hunnewell estate, near Boston. It is in substance as follows: *Pinus Lambertiana,* and *P. Beardsleyii* unharmed by the frosts of last winter. *Picea Nordmaniana,* and *P. pinsapo* ditto. *Abies Smithiana,* and *A. nobilis,* ditto. *Thuiopsis borealis,* and *Cephalotaxus Fortunii,* ditto. The Wellingtonia, or Big-Tree of California, and the Deodar cedar but slightly injured.

We should be glad to learn whether these trees were covered by snow, or protected by straw or matting. If not, we are surprised at the reported hardiness of some of them.



Native Evergreens.

Some of the evergreens now bought at the nurseries, are supposed by many to be of foreign origin. For instance, the Norway Pine is not from Norway alone, but may be found growing wild in this State. It is *Pinus monticola* of the books.

The common Juniper, (*Juniperus communis*) is often supposed to be imported from England and Sweden; but it grows wild in central and southern New-York, and Pennsylvania, and elsewhere. It is none the less desirable on this account. It takes different forms. Sometimes it is upright and compact like a miniature Lombardy poplar; again, it is more open and spreading, looking when full grown, like an ill-built hay-stack; again, it is straggling and drooping, its foliage hanging down almost perpendicularly from its horizontal branches. The first style is most admired. And we will here say that most junipers can be trained into this shape by passing a cord spirally around the branches wherever they show a tendency to spread. We annex a cut of a fine, well trained specimen standing on our own grounds. The Swedish juniper, we think, takes this form more naturally than any other.

The Savin (*Juniperus Sabina*) is a native, though some species are imported. It forms a dense spreading thicket. Travelers on the N. Y. Central Railroad may see it on the hill-sides near Little Falls. It also abounds at Niagara. It may be made quite ornamental.

The Cembran Pine (*Pinus Cembra.*)

This is one of the newer evergreens, perfectly hardy, and very desirable. We have observed it for several years in the latitude of Albany, growing by the side of the native white pine, and it has proved equally robust. It has not yet been extensively planted, but may be found in most of our nurseries, and at a reasonable price. It is a native of Switzerland, Savoy, and Piedmont, where it grows on the coldest mountains, and of Tartary and Siberia. In Europe, it is sometimes styled the Aphernousli-pine, from two German words, signifying a nut-pine. The kernels of its cones are eatable, and in this respect it resembles the famous Italian Stone-pine. All travelers through Northern Europe speak of its grand and majestic appearance, crowning the ridges of the mountains.

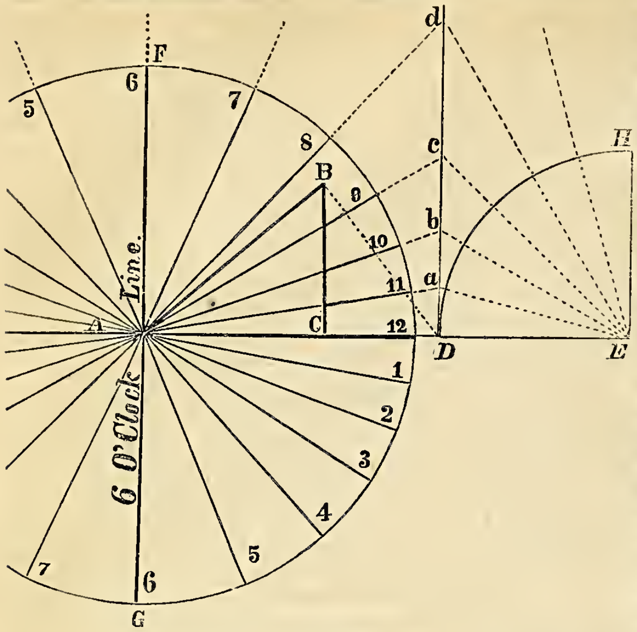
Speaking of this tree, Harte, in his Essays, observes: "Its timber is large, and has many uses within doors; its grain is finer and more beautifully variegated than deal, and the smell is more agreeable: it is useful for wainscoting, flooring, and other joiner's work, and the wood makes excellent firing for stoves and ovens. The peasants of Tyrol, where this tree abounds, make various kinds of carved work with it, which they dispose of in Switzerland among the people, who are fond of the resinous smell which it exhales. The bark of the trunk is of a whitish cast, and the branches resemble those of the Spruce-fir. They are long, smooth, and are produced by fives."

The only objection which can be made to this tree, is its comparatively slow growth—as to its appearance, there can be only one opinion. A writer in the English Gardener's Chronicle lately, says, speaking of a fine specimen in the pleasure-grounds at Osberton-Hall; "The Pinus Cembra is nearly fifty feet high, and the branches, at twenty feet from the ground, spread sixty feet in circumference, and the trunk, at the bottom, girths eight feet. Few of the Pinus tribe are more beautiful than this; its handsome conical shape, and short, rigid horizontal branches, combined with its color, render it particularly attractive. It certainly deserves more extensive cultivation than it has received, for, planted as a single specimen, it is really magnificent."

Mr. Sargent says there are two varieties. One, the Siberian Stone-pine, with short, dense, and dark green leaves; the other, the Dwarf Cembran pine, found among the rocks of the Ural mountains. The true Cembran pine grows fifty or more feet high, though it takes many years to reach that altitude. It makes always a very pretty, compact, soft-green tree, and is very desirable.

* * *

THE WEEPING HOLLY.—Wherever the common English holly will thrive, this novelty may be expected to succeed. South of New-York we think, will be its best region in this country



About Sun-Dials: Again.

Since the publication of our article on Sun-dials, in the Jan. No., we have received numerous letters from subscribers touching the same general subject. Some of these letters ask for further information on the construction of dials, while others bring us information bearing on this point; some inquire for mottoes or inscriptions for dial plates, while others contain such mottoes.

The following communication by Mr. W. Conrad, Somerset Co., Pa., gives a pretty clear idea of the method by which the hour lines may be marked on the horizontal Sun Dial, described in our previous article, and which is most generally in use.

"Draw a straight line of indefinite length as ADE which we may call the meridian line. At the point A, draw the perpendicular FG, which will be the 6 o'clock line. From the point A draw the line AB, making an angle with AC, equal to the degrees of latitude of the place: thus for a place 40° north latitude, the angle CAB must be 40°. Now draw the line BD at right angles with AB. Take a space DE on the meridian line, equal to BD, and draw the quadrant DEH, with the radius DE, and erect the perpendicular Dd. Divide the quadrant into 6 equal spaces and carry the dividing lines out to the perpendicular Dd, as seen at Ea, Eb, Ec, Ed. From the points of intersection on the perpendicular, Dd, draw the lines aA, bA, cA, dA, etc., these form the hour lines for the forenoon; the 7 o'clock line is not fully drawn out, to save space. Draw the afternoon lines A1, A2, A3, etc., at the same angles with the corresponding lines A11, A10, A9, etc., on the other side of the meridian line. The 4, and 5, morning hour lines, and 7 and 8 afternoon lines, are obtained by extending the lines 4, 5, and 7, 8, on the opposite side of the 6 o'clock line.

Now if we take a circle, marked with hour lines as described, lay it perfectly level, with the meridian (12 o'clock line) running exactly north and south, and set up the triangle ABC perpendicular to the plane of the circle, the shadow cast from its edge will fall upon the several lines at the times indicated."

To construct a dial with exact accuracy requires much skill, but with a little painstaking, any one handy with tools could get up a very respectable instrument by following the above diagram and explanation. First mark out a pattern of the circle with its lines and the triangle, upon a large sheet of drawing paper, and it can then be worked out of tin plate or other common material. The heavy mark on the meridian line in the diagram extending from A to the edge of the circle, shows where the base of the triangle or "gnomon" is to be fastened. The latitude of the place can be obtained from maps, or in most places, some nautical friend will furnish it from observation with the proper instrument.

A subscriber who modestly omitted to sign his name, but whose letter (he will pardon us for saying,) is post-marked Lafargeville, N. Y., sends us a large budget of mottoes appropriate for Sun-dials. We select several of the best:

A very sensible man, with a refined mind, caused to be painted on the dial of his city residence, two figures, one personifying *Work*, the other *Rest*, with the following words which relate to the hours: "*Plures labori, dulcibus quædam otiis*," which may be rendered, "Many hours to labor, a few to pleasant leisure."

On the dial of his country-house was written: "*Dum fugit umbra, quiesco*," which may mean, "I stand still, while the shadow moves." Or it may be translated more freely thus: "A wise man enjoys the quiet of retirement, as the shadow of this world passes away."

Upon the sun-dial of Chantilly, near Paris, was inscribed this motto: "*Una dabit, quod negat altera.*" Rendered into English, thus: "One gives, what the other denies." That is, as we suppose, Providence sends us good and bad, bright hours and dark.

Here is another good one, from Horace: "*Dona præsentis rape laetus horae.*" "Take joyfully whatever the present hour brings."

And this: "*Utari præsenti, memor ultima.*" Which done into English, runs: "Make use of the present hour, remembering the last hour."

For reasons which will be obvious to a careful reader, we think this might be improved by the following alteration: "*Fruere præsenti, non immemor ultima.*" Translated thus: "Enjoy the present hour, not unmindful of the last."

Here is a good one: "*Le ciel est ma règle*," Or, "Heaven is my rule."

Another: "*Me lumen, vos umbra regit.*" Or, "I am ruled by the light, you by the shadow."

Another: "*Dubia omnibus, ultima multis.*" Or, "The present hour, uncertain to all, is the last one to many."

Several others: "*Suprema hæc multis, forsan tibi.*" Rendered, "This hour is the last to many, perhaps to you."

"*Latet ultima.*" Rendered, "The last hour is hidden."

"*Umbra transitur est tempus nostrum.*" Rendered, "Our life is like a shadow that passeth away."

"*Dies mei sunt umbra declinaverunt.*" Rendered, "My days are like a shadow that declineth."

From such a variety of mottoes, it would seem that every taste might be gratified. The sixth, as altered, suits our taste, and is on our Dial.

* * *

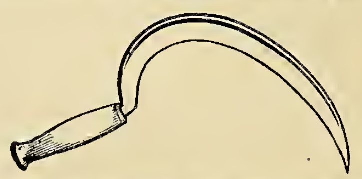
A "progressive" suggests that in this age of improvements, old Father Time should be represented with a Yankee clock in his hand, and seated on a steam mowing machine. Was he thinking of railroad disasters?

Cutting Grass and Grass Cutters.

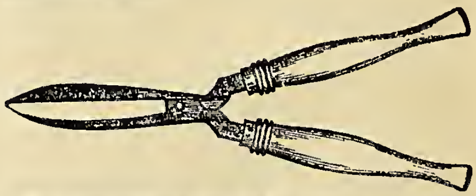
The grass is now growing rapidly on the lawn, around the borders, upon the "bleaching plat," and along the edgings of the flower beds. It does not look as well after attaining much hight, and where it overhangs the paths, loaded with drops of dew or of recently fallen rain, often prevents the enjoyment of a stroll at the pleasantest time of the day, when everything invites by its freshness.

The turf always has the finest appearance soon after cutting, or when the grass is two or three inches high, of a dark green color, with a fine thick velvety growth. To keep it in this condition, frequent cutting is necessary as often, at least, as every other week. For large grounds, a lawn grass-cutter is frequently used. It is drawn by a horse, or by men pulling upon ropes attached to it. These are expensive, costing $35 to $45 for small hand sizes, and $75 to $125 for larger horse machines. In using them, the grass is forced by dull revolving knives, or feeders, against a stationary sharp blade at the bottom. They leave a very pretty even surface, but the cost is such as to preclude their general use.

The common scythe, or one of rather short length, is more frequently used in mowing the lawn. In the hands of a skillful workman, a very even surface is left, but it requires some care not to cut too closely, as the sun burns and injures the roots if left entirely unprotected. After the mowed grass is raked off, which should always be done as soon as it is cut, the ground may be gone over again, to pare down any uneven spots.



For ordinary village and city grass plats, a common grass hook, as shown above, is quite sufficient. It is a sharp, sickle shaped piece of steel, fastened in a short wooden handle, and can be purchased at agricultural and seed stores for 37 to 62 cents, according to the size and quality. The grass is cut by striking it quickly with the hook. A little practice is necessary before one can cut fast and evenly. An expert will leave the surface behind him very true and smooth. The knife should be ground frequently, and only used when quite sharp. We have frequently used a hook of this kind to pare the rough portions of the lawn after the scythe. It can also be employed to good advantage in cutting weeds in a neglected garden.

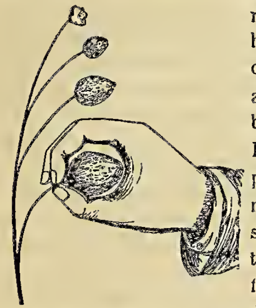


For grass edgings the garden shears are often used, and though cutting with them at first seems a very laborious operation, by a little practice it is performed quite easily and rapidly. The grass can be left at any desired hight, and there is no difficulty in clipping it evenly. They are only used on narrow borders, and along the edges of the flower beds where caution is needed. Even in these places a grass hook will answer. The garden shears are of different sizes, with steel blades and wooden handles, and cost $1 to $2 or more per pair. They are also kept at the agricultural, horticultural, and seed stores.

How to Pick Strawberries.

A child knows how to pull off the ripe berries, but if you will examine, you will find one, two, or three unripe or green ones, gathered by careless or unskillful picking, accompanying each ripe one into the basket. This fruit grows in bunches upon a common fruit stalk, and there is a great difference with different varieties, in the habit of parting easily at the joints. The Walker's Seedling, one of the richest flavored berries grown, and a very good bearer, is seriously injured by this tenderness at the joints. Unless the greatest care is exercised, you get more green than ripe fruit at picking.

As this work is generally done, the berry is pulled from the stalk, causing it to part at the weakest point, which is sometimes below the whole bunch of fruit in which there is but a single ripe berry. In consequence of careless picking, less than half a crop is realized; for the plant has no power to send out new fruit stalks, and repair the waste before another season. In the proper mode of picking, the berry is not pulled from the stalk. It is taken between the thumb and fore finger, and the thumb nail is brought down upon the ball of the fore finger, cutting the stem as near the fruit as possible, as seen in the figure. The thumb nail of the strawberry picker should be left long for this purpose. The stem is made fast between the end of the nail and the finger, and where the stem is not immediately cut, it is forced off by a gentle contraction of the thumb and finger. This leaves the rest of the bunch to ripen. These directions apply to fruit picked with the hulls left on, which is the way generally adopted with the finer kinds.



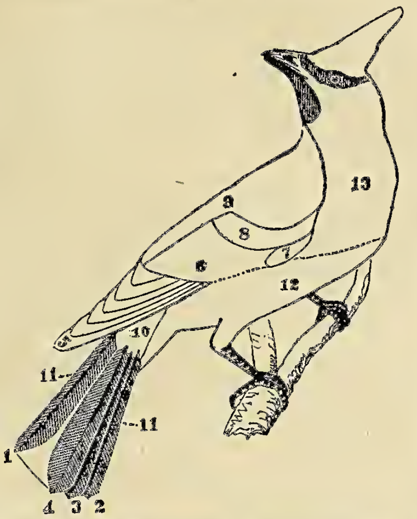
Much of the profit of strawberry culture will be found to depend upon careful picking. It is easy to waste fifty bushels to the acre in destroying green fruit. If children are employed in this business, they should be carefully instructed in the best mode of picking.

Thinning out Plants.

We hereby repeat our annual advice on this subject. Most gardeners are apt to let their vegetables and flowering plants grow too close together. They sow an extra amount of seed, in order to guard against contingencies, and when the plants shoot up vigorous and handsome, it is quite hard to pull them up and cast them away like weeds. But this must be done, if we wish for the best results.

Cucumbers, melons, and squashes, should be thinned out to three vigorous plants in a hill; pole beans to not more than four. Beets, onions, carrots, parsneps and the like, should be repeatedly thinned, until they stand far enough asunder to allow the full development of root and leaf. Let this be done, too, in good season, or the plants will be drawn up spindling, running to leaves more than to roots. A beet, or ruta-baga, without a good root, isn't worth much for its leaves.

So with flowering plants. Nearly all gardens suggest the idea of a jungle. Most persons seem ambitious to get as many plants into a given space as it can hold, forgetting that a small number well selected, well developed, and trained, give greater satisfaction. Let the annual plants now coming forward, be subjected to a faithful thinning out, and the advantage will soon be apparent.



Inexpensive Household Ornaments....IV.

SPECIMENS OF BIRDS.

In the October No. of last year's *Agriculturist*, page 333, we gave an illustration of the "White Breasted Nuthatch," (Sap-Sucker,) drawn from a beautiful specimen prepared in a manner new to us, and forwarded by Mr. John Marsden, Oneida Co., N. Y. In answer to our request, he has kindly furnished minute directions for the process of preparation. It is much less difficult than the ordinary way of skinning and stuffing, and a very life-like representation of the bird is produced. The feathers only are used—it is, as Mr. M. calls it, a method of painting a bird with his own plumage." Specimens of this kind arranged in glass cases, or frames, are beautiful ornaments for the parlor. The materials required, are a bird, a sharp pen-knife, and scissors, a smooth pine board about twelve inches square, black lead, and camel's hair pencils, a box of water color paints, drawing paper, and a smooth paste. This is made by dissolving a teaspoonful of gum arabic in a teacup of boiling water, add flour batter till the paste is thick, and boil well. In commencing the work, we must first obtain a correct life size outline of the bird to be represented.

As each bird has some peculiarity of shape, it is best for those unskilled in drawing from nature, to copy the outlines from some illustrated work on Ornithology, which can be done very neatly upon thin oiled paper laid over the engraving. But as these pictures are very seldom of the natural size, it is necessary to enlarge them, which may be done thus: Take an outline of the print on oiled paper with a lead pencil, mark out the outlines of the wings and eyes, also the divisions of the different colored plumage, if you think it necessary. Then, rule marks across your outline, with a fine lead pencil, from top to bottom, and from side to side, one-quarter of an inch apart. Measure your bird by the print: if, for example, it be twice as large, take a piece of drawing paper, two inches larger every way than the bird, rule it with the same number of squares as are on the oiled paper, but make them twice as large, or half an inch square. So if the bird be one half, or one third, or any number of times larger than your outline copy, make the squares on the drawing paper larger in this same proportion. Then draw the small outline, square by square, into the large squares, observing to make the part of the outline you draw, fall in the same part of the large squares, that it does in the small ones. When the outline is finished, paste the paper down by the corners to the working board. The parallel pencil lines will do no harm, as the outline will be covered with feathers, except the bill and feet, which must be painted.

The figure shows a half life-size outline of the Carolina Chatterer, (*Bombycilla Carolinensis*), known by the names of Cedar bird, Cherry bird, Wax wing, etc. This bird is very common in the Atlantic States, and one of the very best to feather. This may be copied, and it will be a very good subject for the first attempt—as he is a sad thief in cherry time, we shall have less compunction in shooting him. Work up your paste fine, adding water if necessary, and with a camel's hair pencil, lay on a light coat of paste where the feather, 1, is to be laid. Pull out the outermost left tail feather, lay it on your board, cut off the quill, and lay it in its place at 1. Next, pull out the outermost right tail feather, cut off the quill, and paste it in its place at 2; lay a little paste on the innermost web of 2, then take the next outermost right tail feather, and paste it in its place as at 3; paste 4 the same as 3; then fill up the left of the tail, as you have done the right. Place the center feather last, which completes the tail. Generally, the quill end, or the base of the tail feathers, must have their shafts lie close together, but not crossing each other Now, take a narrow strip of thin unsized paper, and paste it over the quill end of the tail, which will keep the feathers in place, after which, lay on a light weight, and let it dry.

Next in order come the "tail coverts." They are not shown in the outline, but by looking at your bird, you will see that they commence with a point half way down the tail, opposite 11, and extend upward, spreading out and filling the space, 10. Pull out the lowest feathers first, cut off the downy end, and use the tips only. Lay on a little paste, take up a feather with your wet brush, by laying it on the feather close to the cut end, and attach it in its place. Paste in this manner a row of feathers, then add a little paste, and put on another row overlapping the first, like shingles on a roof—work this color of feathers up through the space 10, and under part of the wing, which must cover them.

Next pull out the longest right wing primary, cut off one inch of the quill end, and paste it down at 5, as you did the first tail feather. Paste the rest of the primaries in the order shown in the outline, by cutting the second shorter than the first, the last one only about an inch long. The feather ends of a folded wing lie close together, one overlying another, so that the outer web and tips only can be seen. Paste a strip of thin paper over the quill end, as you did on the tail: generally, all large feathers must be secured in this way; and if the bird is large, the shafts must be pared thin on the under side with a sharp knife. Having proceeded so far with your wing, lay on a light weight, and let it dry. Now, pull out the secondaries (the wax-tipped feathers, 6,) commence to paste them down on the outside of the wing, overlapping each other towards the back, and the tips overlapping part of the primaries. Next put on the small "bastard" feathers, 7; then the wing coverts, 8, on the outside, overlapping each other towards the back, and the tips overlapping the "bastard" and secondaries; and then the back feathers, 9. Commence next at the tail, and put on all the under feathers, 12, 13, each feather in its own place, till you come to the head. The shaded parts around the head and throat are intended for the black feathers. All the small feathers must be put on very full, as much of the beauty of the specimen depends on this; cut all the down from each feather, take them up with the wet brush, being careful to let the paste touch only a small portion of the cut end.

Having finished the feathering, draw and paint the eye in its natural color, on a separate piece of paper, cut it out, and paste it in the right place on the top of the feathers. Paint the bill and feet, shading with black ink. If the eye is dark, on a dark ground, it is best to leave a white circle round it, otherwise it would not show well.

When the specimen is dry, cut it out with a sharp penknife, leaving no paper around it except the bill, legs, and feet. Turn it over, dampen the back of the paper a little with water, place it between the leaves of a book, and lay on a heavy weight to press it for a day or two, which will take out the wrinkles caused by the wet paste.

The best way to preserve these specimens, is in a frame with a glass, like a common picture. Take a sheet of thick drawing or chart paper, the size of the frame and glass, paste on a sufficient number of specimens, being careful to paste only the bill and legs, and a few touches on the body, just enough to keep them in place, or the wet paste will wrinkle the paper and spoil it. Fill out the picture with a landscape, trees, etc. Each specimen which requires it, should be perched upon a branch. Number each specimen, and record the number in a catalogue, where its name and habits may also be written. In this way some knowledge of ornithology, and a taste for natural history, will be acquired, as well as a handsome household ornament.

Look out for Moths.

There is scarcely a more provoking pest of the household than the moth. His depredations are carried on so quietly, that very often his existence is not suspected until upon bringing out the best dresses, or expensive furs, which had been laid away in supposed safety, they are found ruined. Great sympathy is sometimes felt for the poor little "miller" that flutters around the candle, scorches his wings—and dies, a warning to the venturesome—but little pity would be wasted on him were it known that this "miller's" children will, if unmolested, make a *grist* of our carpets, coats, furs, and whatever else may suit his extravagant taste.

There are several species of these insects, differing in size, form and habits. Some attack woolen cloths of every description; others confine themselves mostly to carpets, and others again are satisfied with nothing but furs. They are mostly known by the name *Tineadæ*; the clothes moth, is *T. vestianella*; the fur moth, *T. pellionella*. In the winged state, they have four short and slender feelers, a thick tuft on the forehead, and very narrow wings deeply fringed. They are busy in May and June laying their eggs where the young may find their proper food, and when they have thus done their share of the mischief, they die. In about fifteen days, the eggs hatch, and the little whitish, sharp-toothed caterpillars or moth worms begin their nefarious operations. They furnish themselves with food, clothes, and lodgings, from the fabrics they destroy; gnawing the substance, and rolling up the fragments into small tubes with open ends, where they keep as snugly ensconced as a turtle in its shell. Like the turtle, some of them carry their coverings around with them. As they grow, they enlarge their garments at each end, occasionally setting in a piece at the sides when necessary. Thus they pass the Summer; then take a Winter nap; change to chrysalids in Spring, and in about twenty days, emerge as perfect insects, to flutter about, find their mates, and raise another enterprising family. Now is the time to rout them out. Take all furs and woolen clothes from drawers, clothes presses, etc., and with a light cane give them a thorough beating, to dislodge the eggs, and expel the dust in which they delight to hide their progeny. Gum camphor in coarse powder, plentifully sprinkled among clothing, and the drawers and boxes containing it, will sometimes prevent their return. Housekeepers sometimes find the moth, notwithstanding this or some other strong aromatic had been applied liberally, because they had not first beaten or shaken out the intruders already in their quarters. Empty cigar boxes are among the very best receptacles for articles subject to moths—they have sense enough to *eschew* tobacco. Ground black pepper sprinkled upon the floor is useful to keep them from carpets; they should, however, be thoroughly beaten twice a year. It is also well to give furs a beating once or twice during the Summer, to make sure work.

For the American Agriculturist.

The Rocking Chair.

There is much comfort, and not a little philosophy in the rocking chair. Its inviting arms and soothing motion are grateful to the weary, and age never looks more becoming than when placidly enjoying the repose they afford. The picture of a household is incomplete without the grandmother, with her knitting needles for a scepter, smiling benignantly from this domestic throne to which her years entitle her. The weary mother quieting her fretful child, knows how to prize its aid, and the invalid finds both exercise and rest in the gentle swaying.

Some would banish the rocking chair as a useless and enervating luxury. But rest is not enervating—the sooner one can recover from fatigue, the better for the muscles. Over-exertion, insufficient rest, or total inaction, these weaken. If a person is content to make a business of rocking away the hours that should be actively employed, this without doubt will enervate, but even this would not be more hurtful than to sit listless upon a hard bench—rather, less so, for rocking calls the muscles slightly into action. For this reason, it is favorable to recovery from fatigue. A cord tightly strained and suddenly loosened, recoils with a sudden snap, but yields without violence if gradually relaxed; so, when the bodily energies have been greatly taxed, and kept up to high tension, the gentle "easing down" given by the rockers, restores the equilibrium gradually and agreeably. The mind is employed and diverted, but not taxed by the constant change of position, and the gentle wings of forgetfulness imperceptibly winnow away the clouds of care.

In selecting a rocker, choose one fitted to support the person in its natural shape. Too many patterns compel one to sit with shoulders drooped forward, chest sunk in, and the back brought to an ungraceful and injurious curve. The lungs should be allowed free play, whether we rest or work; they will aid in resting by vitalizing the blood, while a cramped posture will of itself cause fatigue. The materials of which rockers or other chairs are made, will depend upon the taste or purse of the purchaser. Spring seated, hair-cloth furniture is much in use for the parlor, and is comfortable, and durable when of good material. For use in Summer, cane seated chairs are preferable. The longer the rockers, the greater will be the sweep of the motion, but where they project far, they are much in the way, and constantly liable to disfigure the base boards, or sides of the room. It is better to assign them a place distant from the walls; and where a chair is much used, an extra thickness of carpet or oil cloth is needed to prevent wearing unsightly places.

Kings Co., N. Y. M. E. H.

How to Make Ice Cream.

This popular luxury will soon be in season, and may be enjoyed to perfection by our rural readers, who know what cream is, and who can readily obtain it. Here in the city, we get various substitutes for the genuine article, the best being made of milk and eggs, but much of that sold at the saloons is a compound of corn starch, arrow root, and in some cases of ingredients known only to the makers. The readers of the *Agriculturist* will thank our kind contributor, Mr. J. Crozer, Mercer Co., N. J., for the following recipes and directions.

VANILLA ICE CREAM.—Take about one large vanilla bean to 3 quarts of pure cream. Split the bean; scrape the seeds into a cup; cut up the rest of the bean in fine pieces, and put with the seeds; add a little water, and let it *stew* for awhile over a fire; when done, and cool, add it to the cream. Add also, ½ lb. of fine white sugar for each quart of cream. When the sugar is dissolved, run the whole through a strainer into the can or freezer.

LEMON CREAM.—For 5 quarts of cream (equal to 9 qts. when frozen). Take 2½ pounds sugar, and about 3 lemons. Grate the outside of the lemons, and rub the gratings fine, with about 1 oz. sugar, then squeeze on to them the juice of two of the lemons, add a little more sugar, then mix with the cream. The cream should be sweetened before the lemon is added. Then strain into the freezer, and freeze.

STRAWBERRY CREAM.—Use ½ pound sugar for each quart of cream, and strawberry juice for flavoring. The berries are squeezed through a piece of muslin, or a strainer, and an additional ½ pound of sugar is allowed for each pint of juice. Use only enough juice to give the cream a slight violet color. Confectioners add prepared cochineal, to highten the color; still more juice can be added if desired. Place it in the freezer, etc., as for the others.

PINE APPLE CREAM.—Cut off the outside of a large ripe pine apple; cut up the rest in fine pieces in a pan, and cover it with sugar; or make alternate layers of the apple and sugar, and let it stand several hours; when wanted, squeeze it all through a strainer, and use sufficient to flavor—one apple to about 6 quarts cream. Allow, also, ½ pound sugar to each quart of the cream; and it is ready for freezing.

ALMOND CREAM.—Take ½ pound sugar for each quart of cream; and about 1 ounce of bitter almonds to 6 quarts cream. Rub the almonds (which should be blanched) fine, in a mortar, or bowl, with rose-water. They should be prepared only as wanted, as they soon spoil. When fine, add them to the cream, etc.

The above are the principal kinds of "cream," usually prepared by the Confectioners. It is easy to see what a great variety can be made by changing the flavoring, which should never be in excess, but just perceptible to the taste. Those who use eggs and milk, may find the following directions to answer.

Take 3 quarts milk; 2 pounds fine white sugar and 15 eggs. Put the sugar in the milk, and set it on the fire, keep stirring until it just begins to boil, then take it from the fire and pour into it the eggs (which in the meantime have been well beaten). Stir the milk well while pouring in the eggs. Then set it on the fire again and let it just *boil*, when it is immediately poured through a strainer to remove all lumps. When cool, put it in the freezer, and proceed the same as for pure creams.

Another.—4 qts. milk; 2 lbs. sugar; 10 eggs. To be mixed same as the first. The flavoring may be added to the milk, or, if extracts are used, add them to the milk when strained into the freezer.

Freezing the Mixture.—To do this well, requires a few trials, but is soon learned. The apparatus described in our last Vol. page 215, (July No.) facilitates the work, but for making a small quantity for occasional home use, a tin pail, a pail or tub large enough to receive it and the ice and salt around it, with a paddle like a pudding stick to stir and beat the cream, are sufficient.

The freezing mixture is made of one lb. of coarse salt to 3 lbs. ice pounded as fine as peas, well mingled together. Place a thick lump of ice in the bottom of the tub, set the can or pail containing the cream upon it, and fill the tub to near the top with the ice and salt. Pour in the cream, put on the cover and whirl the kettle around by the handle, first one way, then the other, until it begins to freeze pretty freely at the sides. Then take the "beater" and handle it so that with each stroke the frozen cream is scraped down from the sides of the can; this brings fresh portions of the cream in contact with the freezing surface, and ensures a uniform congelation. The beating is also necessary to impart "lightness" to the cream, by forcing in air. Pure cream, properly frozen, is very soft, smooth, and light to the taste—if not properly done, it will seem coarse and contain frozen particles. The more milk that may be added to cream, the more difficulty in beating it light; for milk, or even eggs and milk, will not catch and retain the air like pure cream; neither will it taste so soft and smooth.

If the cream freeze very rapidly to the side, indicating the use of too much salt, raise the can out of the tub for a few minutes, but continue to use the beater. As a general rule, a can half-full of pure cream, should be beaten until it is very nearly full, or double in quantity; the freezing going on at the same time.

When the beater is taken out, scrape it off lightly, so that none of the greasy, soapy substance which may have collected upon it, will get into the cream—as it would spoil the flavor and quality. When the cream is finished, draw off a part, or all of the water in the tub, and place around the can more ice, in larger pieces and with less proportion of salt. If the cream is not to be used for some hours, immerse the can in the ice and salt, and lay a cloth over the tub. These directions are to be observed in making all kinds of ice creams; during the whole process great care must be taken to keep any salt or salt water from the cream, as this would ruin the flavor.

Recipes.

To Settle Coffee.—J. Armstrong, Columbia Co., Wis., recommends the following method: Brown the coffee in the usual manner, and when nearly cool, break an egg upon it, and stir it well, to have each kernel coated. The coffee should not be warm enough to cook the egg. Use one egg to a pound of coffee; let it dry well before grinding. When boiled for use, it will settle without further trouble.

Pork Apple Pie, contributed by "L." Line a deep plate with pie crust, pare and slice apples enough to nearly fill it, sweeten and spice to the taste. Cut slices of salt pork very thin; lay them over the apple, and cover with the top crust. Bake two hours. [Rather greasy to digest well.]

Mrs. E. Gilbert, Lenawee Co., Mich., contributes the following three:

Cheap Sponge Cake.—One cup white sugar, two tablespoonfuls butter, one cup sweet milk, 1 teaspoonful cream tartar, ½ teaspoonful soda. A little less than a pint of flour, 1 egg, and nutmeg to taste.

Cookies.—One cup butter, two cups sugar, one cup sweet milk, half teaspoonful soda, nutmeg or caraway, for spice; mix with flour until quite stiff, roll thin and bake quick. These I think superior to those made with eggs. They improve with age if kept in a covered stone jar.

A Good Plain Gingerbread.—One coffee cup thick cream, one cup molasses, one teaspoonful soda, ginger to taste, a salt spoonful of salt. Stir quite thick with flour, and bake in square tins.

To Keep Hams in Summer.—Contributed to the *Agriculturist.* Cut in slices and trim off the rind and outside; fry it about half as much as you would for the table. Pack it tightly in jars; pour over it the fat that fries out, and enough lard to cover it; close the jar tight, set in a cool place, and it will keep fresh all Summer.

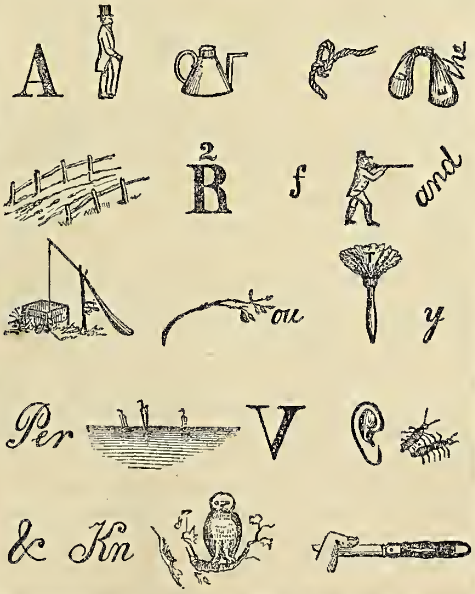
Bread Cake.—To one cup of light bread sponge, add one egg, one cup of flour, half a cup of butter, half a teaspoonful of saleratus, spice to your taste; stir well together, and put immediately in the oven: bake as for bread.

Baked Indian Pudding—Contributed to the *Agriculturist* by Mrs. L. Bright, Isabel Co., Mich. Scald ten tablespoonfuls of Indian meal in three pints of sweet milk: add an ounce of butter, and sugar or molasses to sweeten to the taste. Bake two or three hours.

The Editor with his Young Readers.

Answers to Problems.

No. 13. *Illustrated Rebus.* A man can knot purse-ue the road two-on-R f-aim and well-th withe-ou t-in-duster y per-sea-V-ear-ants and kn-owl-edge.—This properly



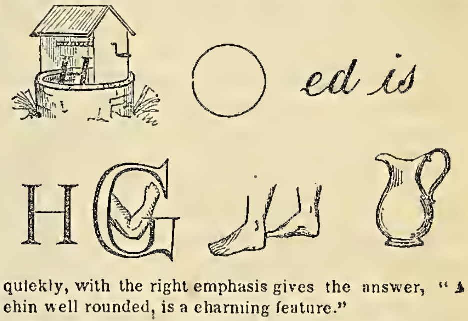
straightened out, reads "A man can not pursue the road to honor, fame, and wealth, without industry, perseverance and knowledge." Translated correctly by Anna M. Pettinger, "A Reader," Wm. H. Simmons, D. H. Du Bois, H. H. Witmer, J. L. McCreery, Flora and Sylvia McClintock, John H. Young, A. E. Smith, Elroy M. Avery, I. Howard Corning, P. P. Halladay, Mrs. F. R. Wildbahn, Robt. Forsyth, Fitch A. Rockwell, Joseph Flowers, Charles Flowers, Wm. Bradshaw, S Henry Hickock, E. C. Clairborne, Henrietta V. Geron, Maggie A. Walker, Mary E. Schoonmaker, A. J. B., George P. Armer, J. D. Baldwin, Howard Adams, J. McKinnie Turner, and Edward C. Hinman.

No. 14. *Anagrams.*

I've no tax,	transposed reads	Vexation.
Rural grist I cut,	"	Agriculturist.
No lies etc.,	"	Elections.
Ah! of sin,	"	Fashion.

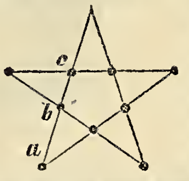
Answered correctly by A. E. Smith, Robert Forsyth, Mary E. Schoonmaker, A. J. B., and Robert C. Hinman, (This lad sent us a *model* letter, telling his story in few words, giving answers to all the problems, and better still, giving his mother credit for helping him.—We shall be pleased to hear from him again, as well as from all our other girls and boys.)

No. 10. *Aunt Sue's Rebus.* The picture reads "H in well round-ed is H-arm in g feet-ewer;" which pronounced



quickly, with the right emphasis gives the answer, "A chin well rounded, is a charming feature."

Read correctly by Mary L. Bartley, Samuel F. Rathvon, Angell Matthewson, A. E. Smith, Edward C. Hinman, and Carrie T. Warner.



No 11 is worked by the following rule. Start from any corner you choose, but after the first time, jump into the corner last started from; thus, first place a kernel at *a* and jump to *c*, then start from a vacant corner, on a line with *c* and jump to *c*, and so on, until the nine kernels are placed. Solved by E. P. Nichols, Edward H. Burd, A. E. Smith, Elroy M. Avery, and Edward C. Hinman.

No. 12. *Labyrinth.* Additional answers received from G. L. Emery, Edward C. Hinman, Gilbert Spicer, W. A. Buckhout, Silas Bice, Fitch A. Rockwell, Doltie Noble, P. P. Halladay, and Robert Mowbray.

New Problems.

No. 16. *The Accountant's Puzzle.*

A Farmer was much puzzled upon receiving the following bill from an illiterate mechanic. The amount, $7 was correct, but the difficulty is to find how it was obtained. Please make it clear.

John Stouter,
To C. Speedy, Dr.

To 2 Iron Plows, @$7	$14
1 Wooden do.	7
1 Wood do	7
	$7

No. 17. *Anagrams.* The transpositions of several of the following are quite comical.

Flit on cheering angel.
A nice cold pie.
Comic trade.
Nay I repent it.
Spare him not.
Moon starers.
Golden land.
Nine thumps.

HAVE YOU SEEN A SKY LARK?

This sweet singing bird is a native of England, where he is a universal favorite. He is about the size of a reed-bird or bobolink. He somewhat resembles the female of that species, except that the breast is yellow, and more spotted. You may recognize him by the fact that he never alights upon a tree, but always on the ground; his foot is so formed that he can not clasp a branch. His manner of singing, too, is peculiar. Early in the morning he springs from the ground, commences his song, circles round and round, winding his way up to a great hight, singing as he goes, sometimes passing quite out of sight. He continues his flight and his song from five to fifteen minutes, descending as he arose in a spiral line, until when from one hundred to twenty feet high, he closes his wings, shoots down almost like a bullet, until near the ground, then spreads his wings to arrest his motion, and alights.

Seven years since a gentleman procured seventy five of these birds from England and liberated them in New-Castle County, Delaware, in the hope that they might propagate and become naturalized in this country. A year after, he heard of a colony of them not very distant from his residence, where they spent the Summer and delighted the residents with their music. Since then he has heard but little reliable concerning them, but believes they have multiplied and spread over a large extent of territory. He would like to know more about them. Have any of our young readers recognized these welcome strangers? If so we should like to hear from them.

ABOUT THE PICTURE—THE NEW FASHIONED BONNET.

Sure enough, "What is it? Man, or Monkey, or both?" What could have put it *into* the heads of those creatures in the picture to put such things *on* their heads, to assume such fantastic airs, and to appear so ridiculous generally. You may be ready to ask "Do people ever make such fools of themselves as the picture represents?" Our artist took the sketch in a street in this city. We are not sure but he has *stretched* it just a little, for he has a very comical turn of mind, and is apt to see things in a ludicrous light. Yet there is truth as well as humor in the drawing. These persons are fair samples of the extra "fashionables." They make dress and display, the business of life. Fashion is their god, and the dress-maker, the milliner and the tailor are the high priests whose instructions they follow. They would not dare think for themselves what style of clothing would be appropriate and becoming, and it would seem sometimes, that the tailors, dress-makers, etc., take pleasure in inventing the most absurd shapes for garments, on purpose to make these fashionables appear ridiculous. At one time the bonnet must be like a little butterfly stuck on the back of the head, good for nothing as a protection, and only serviceable to the milliner who sells it, and to the physician who is called to cure the colds taken by such exposure of the face and head. But the fashion changes, and *now* the shape of the fashionable lady's hat resembles a coal scuttle in front, a scoop shovel behind, with flowers as big as apples thrown in to fill up the vacant spaces. The male fashionables just now bestow their principal thought on the beard; and we have that appendage tortured and twisted into every conceivable shape, until a full blown dandy might safely pass for a baboon—no one would suspect him of being a man.

What is it ???
Is it Man, MonKey or both?
LETTERS
W. ORR—CO

A SCENE FROM FASHIONABLE LIFE.

You can readily see that these gentry are a useless class. The female in the picture can pet her poodle dog, but she would count it a disgrace to appear in the streets with a babe in her arms—well, she is better fitted to care for a puppy than for a child. The exquisites of the other gender, can swing a cane, but not a flail, they can "cut a swath" in Broadway, but not in the meadow. The ragged little street sweeper is doing more real good in the world, than the whole tribe of these "nobodies." These useless, vain and silly creatures were once promising young people. But they were educated to nothing useful, and you see the result; they are a laughing stock for you and for all sensible persons.

TALK ABOUT SWIMMING.

Can you swim? Or rather, we should ask have you learned this art? for all *can* swim; it only requires practice to prove their ability. It has often surprised you, perhaps, to see how easily animals swim. A dog or a cat thrown into the water for the first time, finds no difficulty in paddling straight to the shore; why is it so hard for a boy to do the same? Partly because the motions required, are different from those we make when walking. Animals you know, use their limbs almost in the same manner in the water as when on land. It requires also a little practice to overcome the difficulty of breathing which immersion causes, and moreover, the sensations are at first so strange, a person loses presence of mind, and is unable to control his motions. Among savage nations, especially such as live near the water, as on the Islands of the Pacific, children take to swimming as naturally as to walking. We have seen in this city, boys of eight years old, expert swimmers, who would dive fearlessly into deep water, and frolic about with all the confidence of a frog. In addition to the health and pleasure of a bath during the wilting heats of Summer, the swimmer is possessed of an invaluable resource in many times of peril. To save a single life would amply repay the trouble of learning to swim, if it were a trouble instead of a pleasure.

Let us give a few cautions and suggestions that may be of service to the learner's first attempts; we take it for granted all our your readers would like to possess this manly accomplishment.

CAUTIONS.

Never bathe immediately after eating. The stomach needs a regular supply of blood when digesting food; but a plunge into water disturbs the circulation of the blood, and stops digestion. Severe illness has followed neglect of this rule. Do not undress and then sit awhile to cool before entering the water; rather plunge in at once than do this, but it is safer to wait until perspiration is partially checked, before removing the clothes. Choose the morning for bathing, and avoid the water, for swimming at least, when much fatigued—a wash in moderately warm water will do no harm. Select a perfectly safe place, where there are no sudden descents to deep water, for learning to swim; and after learning the art, venture beyond your depth no further than where you feel perfect confidence—a swimmer is in danger the moment he fears. Never be tempted to foolish or venturesome exploits by a desire of exhibiting your courage or skill. It is braver to resist a taunt or sneer, than to allow them to lead you into danger. If possible, accompany good swimmers in your first lessons, they can show you more than any description can teach, and also to aid you if in danger.

HOW TO SWIM.

We will suppose you standing on the bank of a stream ready for first essay. Enter the water boldly, and at once wet the whole body, head and all with a good *souse*. If you stand long shivering and dreading, your courage will rapidly cool off. Now wade out to where the water is breast high, and turn and face the shore. Lean forward enough to bring the breast upon the water, throw the head back so that the chin rests on the surface, place the hands palm to palm, the fingers and thumbs closed together. Then spring forward from the ground, at the same time thrusting the arms forward as far as possible; then deliberately sweep each arm around backwards and a little downward until they are at right angles with the body, remembering to turn the palms of the hand outward to press against the water. Bring the hands together for another stroke, at the same time gather the legs up for a kick outward and backward, and push ahead by repeating these motions. Keep yourself as near as possible in a horizontal position; beginners usually allow the legs to sink too far down. Observe a frog when he swims, he is a model in this line. Try from the first to make these efforts deliberately, and not with a convulsive jerk, which would soon tire you out. Never mind a little ducking and strangling at first. Remember, the body is lighter than water, when the lungs are supplied with air, and it *will* float; and if you do not struggle and thereby thrust your nose under the surface, and shut out the air from the lungs, you will not sink. A few resolute trials in the manner described, will enable you to say "I can swim." After this, frequent practice will enable you to quicken your motions, and attain all the rapidity of an expert.

FLOATING AND SWIMMING ON THE BACK.

When the young swimmer has acquired some degree of confidence in his powers, he should learn to place himself so as to float at his ease upon the surface. This will enable him to rest at any time when fatigued, and also to sustain himself until help arrives, if attacked with cramp. Let him choose a still, unruffled place not far from shore, throw the head back so that the face looks upward and the nose is the highest point out of the water, throw the feet forward, and stretch his arms out at full length beyond the head on the surface. The toes, the face and the ends of the fingers will then be in a line above the water, and he may with very little care lie there as comfortably as upon a bed. In this position, the lungs filled with air, are near the center of gravity, the head and arms balance the legs, and the body floats as easily as a plank would do. If a person when in deep water will gently throw the head far back, so as to elevate the face, and bring the whole back part of the head under water, and keep the arms folded, or by the sides, he will hang suspended perpendicularly with his nose safe in the air; it will require several trials to keep either of the positions just described, as any struggle will throw the head down.

To swim on the back, *head first*, you may use either the hands, or feet, or both, for paddles. When floating on the back, bring the arms around toward the sides with a sweep slightly downward, and at the same time bend the knees and push vigorously with the feet, and it will give a motion backward and a little upward—enough to enable you to throw the arms back again over the head for another stroke, without submerging the face. Or you may extend the feet, bring the arms near the sides, draw the hands back by bending the elbows downward, letting the hands pass edgewise through the water, then turn the palms and push toward the feet. Some swimmers place the hands against the sides, and send themselves back ward by bending the knees, and thrusting the feet forward rapidly against the water. Swimming on the back, *feet foremost*, is easily done by carrying the hands palms outward, with a sweep from the sides, until they are at right angles with the shoulder, then returning them edgewise through the water to the sides again, and repeating the strokes in the same manner.

We have not space to describe and give directions for the many evolutions and feats that may be performed by an expert swimmer. These are better learned by imitating one already at home in the water—it will be enough for all practical purposes if you learn to make your way through the water well, and to rescue a drowning person if occasion require.

THE WONDERFUL PLANT.

We were much amused with the following anecdote, the substance of which was published in a New York paper recently. There are attached to the Capitol grounds at Washington, gardens, conservatories and hot-houses, under the care of a gardener appointed by the President. The man holding this situation was an enthusiastic and accomplished botanist, and prided himself not a little on his science. One of his friends was one day boasting of his acquirements, when Mike Walsh, a Member of Congress, determined to play off a joke which should prove that the gardener did not, at least, know every thing. He accordingly prepared a flower pot, inserted in it what appeared to be a very singular plant, which was neatly tied up to a stick, and carrying it to the gardener, led him to believe it had just been brought from Japan by a Lieutenant in the Navy, and requested him to name it. The gardener inspected it closely, examined his botanical works, pronounced it a species of Cactus, and gave it a high sounding Greek title; he also, after much entreaty, persuaded Mike to leave it with him, to be cultivated in the hot-house. It was cautiously sprinkled with warm water, placed under a bell glass, and watched with great solicitude. In a few days, its appearance changed considerably, and the delighted gardener exhibited it to all visitors, declaring that it was about to send out buds and blossoms. But after waiting a little longer, a most unpleasant odor was perceived arising from it, and the gardener began to "smell a rat." He took off the bell glass, removed the soil around the roots and found that the joker had planted a large rat in the pot, leaving the tail sticking up for him to name and cultivate! He did not succeed in raising any vegetable rats, and his scientific pride was somewhat taken down

It is quite likely that this scientific gardener like many others we have known, depended too much on what he read in books, without using his own eyes sufficiently; which reminds us that a new relative has just knocked at our sanctum, to ask the privilege of talking a little with you. We introduce to the *Agriculturist* family "Aunt Elsie"—hear what she says about

EYES OPEN.

"Come on, Will, it is time wo were off. The sun is getting high, and we want to pick our strawberries in time to go to the old mill this afternoon."

"Wait just a minute, Harry, while I see Jacob put this piece of work together."

Will was Harry's guest, and as he was an obliging boy, he did not hurry him again, but whistled about a little restlessly, until he was ready. As they walked on to the strawberry field, Harry could not help saying,

"I can not see why you take such an interest in old Jacob's tinkering. He is always about some such works, but I never think of watching him."

"Well, I watch him to learn. He has taught me, at least half a dozen new things since I have been here this week. Indeed I have made it a sort of rule lately, to pick up what knowledge I can everywhere. It is only necessary to keep the eyes open, and it adds a great deal to one's enjoyment."

"But you will never have occasion to use this knowledge. You are not going to be a carpenter, or a blacksmith or any such thing, your are going to college."

"Still some knowledge of all these things may be very useful to me some day, or enable me to be of use to some one else. Besides our teacher says that every new idea enlarges the mind, and fits it better for action in any business."

"Well, I hope your knowledge will be very useful, but here we are at the strawberry field. They are thick as clover, and red as little Nelly's lips. We will put the very biggest we can find into this little basket for her, I brought it on purpose, and she will be so pleased."

When the boys reached home again with their well filled baskets, they were very warm and thirsty. As they passed the barn, Harry suddenly remembered that he had forgotten to water his beautiful chestnut pony, and the poor fellow must be suffering.

"Oh, I am so sorry, Will," he exclaimed, "Let us hurry as fast as we can."

But he made "more haste than good speed," for in seizing the moss-grown bucket, and dashing it down into the well, a link in the chain which was quite worn, gave way, and down went the bucket to the bottom, twenty-five feet from the well curb. There was no one at home, as Harry's father and mother had gone to town to spend the day, taking little Nelly with them. Harry was quite in despair, but Will seemed much at ease.

"If you can get me a pair of steel yards and a rope, I think I can bring up the bucket," said he. Harry ran to the "cellar-way" and brought out the clothes line and steelyards very quickly. The rope was then fastened securely to them, and carefully lowered to the bottom of the well. After sounding about a little while, one of the iron hooks caught in the chain, and the two boys were able to draw the bucket up quite full of sand and water. When the accident had been repaired, Harry expressed his surprise that Will was always ready for such emergencies.

"It is only by keeping my eyes open that I learn such little things. I saw a poor black-washerwoman we had once, fish up our bucket in that way, when just such an acident happened at our house. So you see even a poor colored woman can teach us something useful."

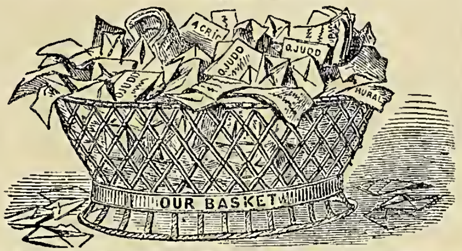
Harry was quite impressed by this little incident, and resolved from that time to follow his young friend's example.

I wish I could induce all my young readers to do the same. Sir Walter Scott tells us that he never met a person so ignorant or stupid, that he could not gain some new idea from him, which was worth possessing. Try to remember this wherever you are, and at all times, and see what a valuable treasury of new ideas you will acquire in even a single week.

A PLUM PUDDING STORY.

Aunt Sue contributed this for her relatives of the "Merry" family, but will not object to repeating it to her many friends in the *Agriculturist* household.

A friend of ours tells a story of a Yankee captain and his mate, something after this fashion: "Whenever there was plum pudding made by the captain's orders, all the plums were put into one end of it, and that end placed next to the captain, who, after helping himself, passed it to the mate, who never found any plums in his part of it. Well, after this game had been played for some time, the mate prevailed on the steward to place the end which had no plums in it next to the captain. The captain no sooner saw the pudding, than he discovered he had the wrong end of it. Picking up the dish, and turning it in his hands, as if merely examining the china, he said—'This dish cost me two shillings in Liverpool'—and put it down again, as though without design, with the plum end next to himself. 'Is it possible?' said the mate, taking up the dish—'I shouldn't suppose it was worth more than a shilling'—and, as if in perfect innocence, he put down the dish with the plum end next to himself. The captain looked at the mate—the mate looked at the captain. The captain laughed—the mate laughed—'I tell you what,' said the captain, 'you've found me out, so we'll just cut the pudding lengthwise this time, and have the plums fairly distributed hereafter.'"



Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

Our Circular Letter—Explanation.

During the present year, several changes in the address of subscribers, have been made on our books; some names have been changed from a single address to clubs; others have changed their post office address, etc. To be sure that our books were right, and to give notice of expirations of subscriptions, we addressed a circular letter on April 2nd and 10th, to all names on our mail books, where the address was not continued the same as last year. The names were simply copied off by a mail clerk, and in two or three instances we find errors were made in not observing the renewal. We supposed the postscript would sufficiently explain the object of the letter, but it seems this was not always fully understood. We desire therefore to repeat here, *that the regular receipt of the* AGRICULTURIST, *is always proof positive that the name of a subscriber is right on our mail books, and that the paper is paid for.* As stated in our standing prospectus on the last page: *The paper is considered paid for whenever sent,* and no one need ever expect a bill for papers already received. If you get the *Agriculturist* at all, *somebody has paid for it, or caused it to be sent to you without expense to yourself.* Please consider this a standing receipt.

Address Wanted. Will Mr. E. Remington please send his full address: naming the Post Office, County, and State, that we may make the change he requests. Looking through our whole subscription list for a single name, is like examining a forest to find one particular leaf. We index the Post Offices but not individual names.

Wire Fences.—"Uncle Jacob" sends a communication on this subject which we cannot find space for at length. He recommends the use of No. 8 wire, which costs about six cents per lb., and weighs nearly one lb. to the rod. He prefers putting the wires on posts set in a low wall. say 18 to 20 inches high, which will prevent cattle from thrusting their heads through. He thinks staples better than holes in the posts to support the wires. Four wires with a wall are sufficient. They are kept to proper tension by a weight hung on the middle of the panel.

Thread Worms in Horses.—H. W. Williams, Winnebago Co., Ill., inquires for a certain remedy for this difficulty with which his young horses are affected. Herbert recommends to administer balls of two drachms of tartar emetic, one scruple of ginger, with molasses and linseed oil sufficient to form the ball. Give one dose every other morning, half an hour before feeding time.

Bloody Urine in Cattle.—J. R. Schane, Williams Co., Ohio.—This usually indidates congestion and inflammation of the kidneys, and is attended by constipation of the bowels. Its cause can not, in all cases, be well determined. Animals in high condition are subject to it when near parturition, though at times it proceeds apparently from something taken with the food in the pasture ground. Youatt directs to bleed copiously at first, and repeat it if necessary; and administer Epsom salts, a pound for the first dose, and half pound doses every eight hours after, until the animal purges, which is usually the signal of recovery.

Sheep Poisoned by Laurel.—David Hall, Sullivan Co., Pa. In the first stages of poisoning by Laurel (*Kalmia Angustifolia*), the animal throws up a greenish fluid, and immediately swallows part of it. If this can all escape, it usually gives relief. It is recommended by Morrell to tie a stick in the sheep's mouth in such a manner that it will be kept open, and the swallowing prevented, until the retching ceases. Roasted onions and sweetened milk are also prescribed.

Remedy for Hoven in Cattle.—J. T. Budd, Cecil Co., Md, contributes the following. Dissolve three tablespoonfuls of super-carbonate of soda in a pint of water and give it as a drench. This will, he says, give relief in five minutes. It appears harmless, and is worth the trial.

To Preserve the Skins of Animals.—A correspondent sends the following method which he says he obtained from a foreign journal, and has found reliable: Stretch the skin tightly and smoothly upon a board, hair side down, and tack it by the edges to its place. Scrape away the loose flesh and fat with a blunt knife, and work in plenty of chalk with plenty of hard rubbing. When the chalk begins to powder and fall off, remove the skin from the board, fill it with finely ground alum, wrap it closely together and keep it in a dry place a few days. By this means it will be made pliable, and will retain the hair.

Quantity of Pork from a Bushel of Corn. Experiments made by C. M. Clay, showed that one bushel of dry corn made 5 10-16th lbs. of pork; of boiled corn, 14 7-16th lbs, and boiled meal from 16 to 18 lbs.

Are Cultivated Parsneps Poisonous?—A Reader in Iowa. We have not found them so after cultivating and eating them for many years. The wild parsneps are poisonous, but the garden variety has by long cultivation lost its hurtful quality, and there is little fear of its regaining it while properly cared for. It might, perhaps, by many years of neglect, deteriorate to its wild habit, but having no apprehensions of this, we have sowed the usual quantity this Spring.

Improving Growth of Rhubarb.—A constant reader inquires the reason for placing an open box, or barrel with both heads out, over rhubarb plants. It partially excludes the light, and causes the foot stalk to shoot up taller, to bring the surface of the leaf to the needed stimulus of sunshine. This increases the amount of the edible part, and makes it more tender and less acid.

To Extirpate Wild Onions.—J. G. Laird, Rockbridge Co., Va. Thorough cultivation of a field with corn, potatoes, or other hoed crops, for a succession of years, with good manuring to keep up the fertility, is the best remedy we know, for this or any similar pest.

To Keep Insects from Cucumbers.—T. B. Gamble, Osage Co., Kansas, writes that a few beans planted with cucumbers will keep off the bugs; the beans can be pulled as soon as the cucumber vines have grown large enough to be out of danger. He assures us that it is an effectual remedy—if the bugs in our garden will believe it, we shall be thankful.

Aphides on the Honeysuckle.—Robert McCormick, Montour Co., Pa. The insects you describe, as infesting your honeysuckles and roses, appear to be a species of aphides, descriptions of which, with means for prevention, were given in the Insect articles by Mrs. Taylor, in the March and April Nos.

Applying Sulphur to Seeds.—K. Eames, Jefferson Co., N. Y., recommends to soak vegetable seeds several hours before sowing, then after draining off the the water, to dust them with sulphur immediately before planting. He states that by this means he has repelled the striped bug and other insects from his garden vegetables. This may do to try as an experiment, we could hardly trust to it alone; some of our insects seem to care little for sulphur, or any other application of the kind. Mr. E. proposes to try the effect of this treatment upon seed potatoes, to prevent rot; we wish him success, but have not much faith.

How shall we Kill Cabbage Worms?—A subscriber in North Carolina writes that cabbages in his neighborhood were almost entirely destroyed last season by a worm that worked its way through the folded leaves and eat out the heart. Snuff, brine, guano, and sulphur were tried without avail. He will be thankful to hear from any one who has succeeded in destroying this intruder.

Scalding the Pea Weevil.—W. W. B. cautions cultivators against using too hot water, for scalding peas preparatory to sowing. He destroyed both weevil and peas by this means. The temperature should not be above 175° or 180° Fahrenheit. Remove the peas after a brief immersion.

The Seventeen Year Locust.—Charles Streeper, Montgomery Co., Pa., writes that this insect appeared in the vicinity of Philadelphia in 1851, and previously in 1834. and that the records show them to have come out regularly at periods of seventeen years before that time, dating as far back as 1706. Consequently they need not be expected in that neighborhood before the yea 1868.

Preserving Green Corn.—Wm. Rice, Hamilton Co., O. It is somewhat difficult to preserve green corn in cans, as we have found by experience. We have succeeded, however, by cooking the corn thoroughly, boiling it at least three hours, and then exercising great care to have the cans filled; and all air excluded. It is important that the corn be fresh from the field, a few hours keeping will render it unfit for this use. Even with every precaution, it will some times spoil in the cans.

The Horse Hoe for Stony Lands.—W. W. B. Where stones are small and not too plenty, this implement works to good advantage. In very stony lands, or where there are many "fast" stones, it is not so valuable.

The New American Cyclopædia.—Vol. IX fully sustains the reputation attained by the previous instalments of this comprehensive work. The present issue contains 784 pages, and embraces about 1300 articles alphabetically arranged, extending from HAY to JER. In the Biographical department, we have notices, more or less extended, of over sixty noted individuals now living, giving the reader an introduction to the "men of the times," which can not be found elsewhere. The contributors are among the most distinguished in their several spheres, and the whole work when completed will present a compendium of what is known by the learned.

Bright's Grape Culture.—A plain, practical work, informing cultivators what to do, and how to do it, is rarely met with. We have many times in reading agricultural books, waded through a dreary waste of paper, for information, and found only talk *about* the subject in hand, plenty of theory but a dearth of facts. We prize this little work because the author goes straight to his subject, gives his directions so clearly that a novice may follow them, and whether they be the very best or not, can easily be demonstrated by experiment. The system of training recommended appears feasible, being easily accomplished, and Mr. Bright states, with excellent results in his own practice. The recommendation of a special fertilizer prepared by the author is the most objectionable feature of the book, giving it too much the air of an advertising medium. With this exception we commend its perusal to vine growers. It contains 120 pages and is sold at 50 cents.

Cheese Making.—Howard Swineford, Union Co., Pa. Very full articles on this subject including the manufacture of the different varieties, were given in a series of prize articles on Dairying, published in the last Vol. of the *Agriculturist.*

Mason and Dixon's Line.—Several inquirers. This term now used to designate the boundary between the free and the slave States, formerly applied to the boundary line between Maryland on one side, and Delaware and Pennsylvania on the other. It was partly surveyed in 1763 by Charles Mason and Jeremiah Dixon, who were employed by Thomas and Richard Penn, and Lord Baltimore. When within about 36 miles of the end of the line, the Sioux Indians compelled them to desist.

Joining a Bar-post with a Rail Fence. Gutelius Snyder, Montour Co., Pa., describes a convenient plan which we have seen in use. It is better than to set an extra post to be fastened to the bar or gate post by withes, or to support the end of each rail by separate stakes, as is often done. A piece of scantling, or a small post is joined to the side of the main bar post by pins, leaving openings to receive the ends of the rails from the fence. Make this upright piece as long as the bar-post, and set it in the ground with the post.

Label the Trees and Plants—A good Suggestion.—E. C. Korner, N. Y., suggests that it would be very agreeable to the public to have all the trees and plants in the Central Park plainly labeled with their common and botanical names. We heartily endorse the suggestion. There are hundreds of citizens who cannot distinguish an elm tree from a magnolia, but who would like to know the names of the trees they meet with. Young botanists, too, would be aided in their observations, and the pleasures of a walk in that beautiful place would thereby be increased. Will the Commissioners make a note of the matter?

Recipe for Out-door Whitewash.—H. J. Tibbits, Queens Co., N. Y., gives the following as Humboldt's recipe; which he has proved to be good. Slake the lime, and add for each peck, 1¼ lbs. sulphate zinc (white vitriol,) and ½ lb. glue dissolved in water.

Locust Trees easily Raised.—Diedrich Steiner, Cumberland Co., Pa., writes that he can raise locust trees almost as easily as corn. He directs to pour boiling water upon the seed, enough to cover them well, stir them a few minutes, and let them remain until swollen. Some will swell in a short time; remove these, add hot (not boiling) water occasionally until all are prepared. Plant them as soon as taken from the water. This should be done during the latter part of April or first of May.

Solution for Preserving Timber.—S. Osborne, Litchfield Co., Ct. Dissolve one lb. blue vitriol in twenty qts. water, and let the wood soak in it from four to six days. This has been highly recommended, and a trial costs but little. We have not used it, and can not speak with certainty of its merits.

Poultry Book.—D. Ryder, Harrison Co., O. Bement's Poulterer's Companion, price $1.25 is the best book of the kind we have seen. We can procure and forward you a copy, post-paid, for that sum.

The Italian Bees.—To a number of inquirers. We have as yet no definite information to give in regard to these bees. Experiments are being made with them in our own neighborhood, which we shall watch carefully. A number of intelligent bee-keepers are taking quite an interest in the matter, and the present season will probably determine, whether these bees are superior to our native kinds or not. We are inclined to think the "pure-blooded" Ligurian bees will prove worthy of introduction here. There appears, however, to be some doubt as to the purity of part of those brought to this country. It is claimed, that those coming by the way of Germany, have been crossed more or less with the German bees. We are by no means certain that any of the pure stock has yet been offered for sale in this country. Until this matter is settled, it will be quite as well for our readers to delay purchasing anywhere.

To Make Rhubarb Wine.—Several inquirers. Trim off the leaves and grind and press the stalks in any cider or other mill. To each gallon of juice, add one gallon of water, and six pounds of refined sugar, and fill the casks, leaving the bungs out. A moderately cool cellar is the best place to keep it. Fill up occasionally, either from juice kept on purpose, or with sweetened water, so that the impurities which rise to the surface while fermentation is going on, may be worked off. When sufficiently fermented, which will require from one to two or more months, bung tightly, and let it remain until Winter, when it may be racked off into other casks, or bottled. Some persons refine it before bottling, by putting into each barrel two ounces of isinglass, dissolved in a quart of wine.

Parsneps for Stock.—C J. Edwards, Orange Co., N. Y. This root contains a large amount of sugar and other nourishment, and is therefore well adapted for feeding stock, particularly milch cows. It adds to the richness of the milk, without importing any unpleasant flavor. It may remain in the ground the whole winter without injury, but on the contrary its quality is improved by the action of the frost. This makes it valuable for Spring feeding. It requires a deep, rich soil and clean tillage.

To Test the Quality of Milk.—C. J. Snow, Scott Co., Va. The comparative value of the milk from different cows in a dairy is easily ascertained by partly filling a number of glass tubes, putting the milk of each cow in a separate tube, and leaving it undisturbed until all the cream rises. The comparative thickness of the cream is then readily seen. A series of tumblers will serve equally well.

Proper Season for Budding.—P. S. Smith, Cattaraugus Co., N. Y. Buds may be inserted as soon as they are fully developed, and the bark of the stock will peel readily. Full directions for the process have been given in former volumes of the *Agriculturist.*

American Pomological Society.—The eighth annual meeting of this Association is appointed to be held at Philadelphia, Pa., commencing Sept. 10th.

Important Cattle Sale.—It will be noticed by reference to our advertising columns, that a sale at auction of thorough bred animals of various breeds from the herd of A. B. Conger, Esq., President of the N. Y. State Agricultural Society, will be held during the present month. We call attention to the fact, because we believe that every opportunity for improving the breed of animals in the country should be embraced. We are pleased to learn from Mr. Conger, that he intends to have hereafter an annual sale of this kind, provided sufficient encouragement is given to warrant it.

List of Agricultural Exhibitions Wanted.

As due notice of the time and place of holding the various Agricultural State and County Exhibitions is very desirable for the convenience of exhibitors and others, we wish to make out as complete a list as possible. Will the officers of the various Societies, or others, oblige us by directing to the address of the *Agriculturist* a copy of their circulars, or premium lists, or some local paper, giving the place of the exhibition, with the name of the County and State, and the day of commencing and closing? The lists we have published in previous years have been widely copied into other journals, and thus proved useful to the whole country.

From the Christian Advocate and Journal.

Progress.

Art has by no means exhausted itself either in the fine or mechanical departments In the latter, particularly where usefulness and economy are combined, astonishing progress has been made within the last few years In this respect it must be conceded that the American artisan excels those of any other country. Weighed in the balance of a just criticism, all are obliged to admit that the scales of Fairbanks & Co., New York, who have devoted their time and attention to the science of weighing, as applied to the compound balance, by which it has been brought to the highest perfection, are, without exception, the best ever invented. We know whereof we affirm, because we have tested their value, and are fully satisfied of their superior merits. The various descriptions of their platform scales embrace every variety of size and form, from the mammoth contrivance of a canal lock scale, capable of weighing five hundred tons, to the nice and delicate balance required for chemical analyses and pharmacy, in which the weight of a thousandth part of a grain is marked by a sensible deflection of the beam. The introduction of these scales has wrought a revolution in the transaction of various business, and their accuracy is such that a uniformity in weights has been established all over the country, thus making them a national, legalized standard. Nor are they confined to the United States; they have found their way to almost every part of the civilized world, and are adapted to the standard of all countries, so that it may be said all nations, if not "weighed in these balances," at least weigh by them. They are adapted to every branch of business, and so great is the facility for weighing that measure has given place to weight. Instead of the half bushel measure for wheat, corn, and other cereals, as formerly used, whereby only a small number of bushels comparatively could be measured a day, now, by the apparatus connected with the platform scales, thousands of bushels are weighed in a single hour. Railroad cars, loaded with live stock, coal, iron ore, and other heavy freights, are weighed by platform scales constructed under the track; and canal boats, freighted with hundreds of tons, are weighed with dispatch and accuracy. At the company's warehouse in New York may be found every variety and style of platform scales required in business transactions; also, weighing beams, gold balances for banks, brokers, jewelers, druggists, confectioners' scales, letter balances, and every description of weighing apparatus.

Vine Growers Convention.

The Southern Cultivator says it is proposed to hold a Convention of Vine Growers and others interested in grape culture, during the coming Summer at Aiken, S. C. The idea originated with the Aiken Horticultural & Vine Growing Association, who, through a committee, have addressed similar associations in the country, prominent grape growers, and others interested. The objects set forth, are, to secure a uniform system of names for the different varieties of the grape, and to determine upon some manner of naming the different wines. Much confusion now exists in both these respects. Many grapes are now known by different names in different localities, and in the rapid multiplication of new sorts the difficulty is increasing. Wines in this country are named after the grape from which they are manufactured; but from the Catawaba alone, it is said a hundred different sorts of wine are manufactured; the quality depending upon the excellence of the fruit, and the manipulation. In Europe, varieties are known by the name of the district where they are made, and the different brands designate the particular locality. A convention of those interested, could do much to settle these points. A large amount of useful, practical information would undoubtedly be brought out by the discussion of the above and kindred topics in the manner proposed. The time for holding the Convention is the third Tuesday in August next, (21st.) and a general invitation is extended to all interested. Communications on the subject may be addressed to A. De Caradeuc, and Dr. J. C. W. McDonald, Woodward, S. C.; E. J. C. Wood, and H. W. Ravenel, Aiken, S C.; or D. Redmond, Augusta, Ga. Secretaries of the different Associations connected with Vine Culture, are requested to forward the names and localities of their Societies, and such suggestions and information as they think proper.

REMARKS.—All gatherings of practical men, like the one proposed above, are very useful, and we gladly give them the widest publicity. But during the hot month of August a large number of Southern men will be absent at the North, and it can hardly be expected that at that season a sufficient number of interested persons from all parts of the country to render the action of the convention authoritative, will visit a Southern city.

The Premiums Still Open.

[FOR SPECIAL PREMIUMS SEE LAST PAGE.]

[The premiums below are offered for subscribers to Volume XIX of the *American Agriculturist* whenever received. Those having partial lists made up can complete them, and other new lists can still be formed.]

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.*

REMARKS.—*The premiums below, except No. IV, are all for* NEW SUBSCRIBERS ONLY, *as we can only afford to pay premiums for once on the same subscriber. But* ☞*in making up any premium lists, two renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞*Names need not all be at the same Post Office.*

Every person collecting names for premiums, can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

Any premium will be paid as soon as the list for it is completed, if we have the duplicate lists to refer to.

Premium III.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8½ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines,** new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two years' use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia,* now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Price, $45.

Premium XIII.—To every person sending 260 *new* subscribers at $1 each, or 330 at the lowest club price (80 cts. each), we will present one of *Allen's Mowing Machines,* with sundry improvements now being added. This is one of the best we have seen in operation. Price $115. Other kinds of Machines of the same price, will be substituted, when specially desired, if satisfactory arrangements can be made with the manufacturers.

Premium XIV.—To every persnn sending 65 *new* subscribers, at 80 cents each, we will present one of the best *Eagle Plows* (2-horse). Price $11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 *new* subscribers at 80 cents each, we will present the best *Subsoil Plow* (two-horse), price $8; *or* one of the best *Horse-Hoes,* price $8; *or* one of the best *Straw and Hay Cutters,* price $8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 *new* subscribers, at 80 cents each, we will present one of the best *Steel-tooth Cultivators.* Price $7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best *Hand Corn Shellers.* Price $6 50.

Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3,) or a *Double mold-board (ridging) Plow.* Price $3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from C. M. Saxton & Co's Catalogue, to the amount of 10 cents for every subscriber sent in at 80 cents each.

Premium XXVIII.—Having proved the accuracy and convenience of Kendall's new and improved *Portable or Aneroid Barometer,* we propose one of those instruments as a premium to any person collecting and sending in 66 subscribers to the *American Agriculturist,* at the lowest club price, 80 cents each, or 33 subscribers at $1 each. These barometers in form resemble a large watch, or small round clock, with the varying pressure of the atmosphere indicated by an index upon a dial plate. Each instrument is packed in a neat leather case, and can be carried about readily, and be hung up wherever desired. They are just as accurate as the long, inconvenient mercurial barometer, and every way a more desirable instrument for common use in predicting changes in the weather, marking the hight of a place above the level of the sea, etc.—Price $10.

Business Notices.

☞ *Sixty Cents a Line of Space.*

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"The best in use."—*American Agriculturist,* 1860.
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Are pronounced by the most competent judges to be *the best,* giving the largest amount of heat, with a small quantity of fuel—owing to their being so constructed as to burn the gases and smoke, and with the largest radiating surface so arranged as to warm the air rapidly to a soft summer heat.

Eight sizes, adapted to warming only one or two rooms, or a whole house, churches, academies, public halls, &c.

THEY ALWAYS PLEASE.

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Send for testimonials (free) to
SANFORD, TRUSLOW & CO., Manufacturers,
239 Water-street, New-York.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Saturday Morning, May 19, 1860.

The receipts of the principal kinds of Breadstuffs have increased materially since the general resumption of canal, river, and lake navigation. Receivers have been offering their supplies freely. The demand, though fair, has not been equal to the ability of holders tn meet it. Most factors have been eager to sell, while buyers have been somewhat cautious in purchasing. Prices have declined materially, and a further reduction is anticipated. Stocks of Flour are now ample. The inquiry is mainly for lots wanted by the regular home trade. There is also some demand for shipment and on speculation. Early in the month, the foreign advices were favorable to export operations. The latest accounts from England have been less encouraging. Under these circumstances, the market closes heavily, with a downward tendency....Wheat is abundant and obtainable on easier terms. Buyers, however, are now moving with reserve, as they expect to obtain some further concessions from holders. The main inquiry is for Milwaukee Club, and Chicago Spring. These varieties are sought after by local millers, as well as by shippers. The advance in rates of freight to British ports has tended to restrict export movements. Corn is unusually plenty, and is decidedly heavy, prices leaning strongly in favor of buyers. At the reduced rates, sound lots have been in more request, in part for the East, and for shipment to England. The receipts are mainly composed of mixed Western....Rye is scarce and is inquired for. It is quoted higher....Barley has been freely offered and has been depressed. The demand has been moderate....Oats have been unsettled. Toward the close, with liberal arrivals and a moderate inquiry, prices tended downwards....Oatmeal has been briskly sought after, chiefly for export, and buyers have purchased considerable lots, at $4 75@$5 per ℔.....Cotton has been in moderate request, mainly for domestic spinning, at our revised quotations. The present crop is expected to yield as much as 4,600,000 bales. The prospects of the new crop are beginning to be carefully watched. The fact of a yield of four and a half millions being taken from our markets at a remarkably uniform high range of prices, indicates an expansion of the Cotton trade that gives increased interest to the prospect of next year's supply. After the rapid increase of the present crop over all previous years, there is already a tendency developing to expect a proportionate increase in the next yield. Planters will doubtless endeavor to extend the area of such profitable culture; but the present season shows that it is probably more profitable to produce the clean, desirable grades, than the low, sandy rubbish now so abundant in all markets. It is yet too early to form speculations on the subject, and for the present it is sufficient to know that on the whole the new growth commences favorably, although it must be mentioned that complaints of injury from frost, drouth, etc., are not unfrequent.....Hay has been less abundant, and with a good demand it has increased in value....Hops, Rice, and Tobacco have been moderately sought after at uniform rates....More activity has been discernable in Provisions, Naval Stores, and Whisky....The transactions in Hemp and Wool have been limited. Prices of the latter have favored purchasers....Other descriptions of Produce have been lightly dealt in.

CURRENT WHOLESALE PRICES.

	April. 18..		May 19.	
FLOUR—Superf to Extra State	$5 30	@ 5 55	$5 15	@ 5 50
Superfine Western	5 30	@ 5 35	5 15	@ 5 25
Extra Western	5 45	@ 7 75	5 35	@ 7 75
Fancy to Extra Genesee	5 60	@ 7 50	5 45	@ 7 50
Super. to Extra Southern	6 20	@ 7 60	6 15	@ 7 75
RYE FLOUR—Fine and Super	3 50	@ 4 25	3 40	@ 4 20
CORN MEAL	3 55	@ 4 05	3 70	@ 4 00
WHEAT—Canada White	1 50	@ 1 65	1 50	@ 1 60
Western White	1 50	@ 1 70	1 50	@ 1 65
Southern White	1 55	@ 1 72½	1 50	@ 1 70
All kinds of Red	1 21	@ 1 50	1 24	@ 1 45
CORN—Yellow	75	@ 76	75	@ 77
White	76	@ 79½	78	@ 80
Mixed	72½	@ 74	70	@ 72
OATS—Western	44	@ 45	40	@ 41
State	45	@ 45½	41	@ 42
Southern	39	@ 42½	37	@ 39
RYE	83	@ 84½	87	@ 88
BARLEY	70	@ 85	70	@ 82½
White Beans	85	@ 1 10	90	@ 1 10
HAY, in bales, per 100 lbs	90	@ 1 10	1 00	@ 1 25
COTTON—Middlings, per lb	11⅛	@ 11¼	11⅜	@ 11⅝
RICE, per 100 lbs	3 50	@ 4 37½	3 62½	@ 4 50
HOPS, crop of 1859 per lb	5	@ 15	6	@ 13
PORK—Old Mess, per bbl	17 37	@		@ 17 50
Prime, old, per bbl	12 75	@ 13 00		@ 12 50
BEEF—Repacked Mess	9 00	@ 10 50	8 50	@ 10 50
Country mess	5 00	@ 6 00	5 00	@ 6 00
HOGS, Dressed corn, per lb			7	@ 7¼
Lard, in bbls per lb	10½	@ 11	11	@ 11½
BUTTER—Western, per lb	10	@ 15	12	@ 17
State, per lb	11	@ 22	13	@ 19
CHEESE, per lb	9½	@ 13	6	@ 11
EGGS—Fresh, per dozen	13½	@ 14	11	@ 12
POULTRY—Fowls, per lb	14	@ 15	13	@ 15
Geese, per lb	10	@ 12	10	@ 12
Ducks, per lb	18	@ 20	16	@ 18
Turkeys, per lb	15	@ 17	16	@ 17
Wild Pigeons, per doz	1 00	@ 1 25	1 00	@ 1 25
Partridges, per pair	75	@ 87	87	@ 1 00
FEATHERS, Live Geese per lb	44	@ 50	44	@ 54
SEED—Clover, per lb	7¼	@ 8	8	@ 9
Timothy, per bushel	3 25	@ 3 75	4 37	@ 4 50
SUGAR, Brown per lb	5¾	@ 8¼	6	@ 8
MOLASSES, New-Orleans, pr gl	45	@ 50	46	@ 50
COFFEE, Rio, per lb	12¾	@ 14½	12½	@ 14
TOBACCO—Kentucky, &c pr lb	4	@ 12½	3¾	@ 13
Seed Leaf per lb	6	@ 25	6	@ 25
WOOL—Domestic fleece, per lb	34	@ 58	32½	@ 57½
Domestic, pulled, per lb	28	@ 48	27½	@ 47½
HEMP—Undr'd Amer'n pr ton	120	@ 150	120	@ 150
Dressed American, per ton	160	@ 200	160	@ 200
TALLOW, per lb	10¼	@ 10½		@ 10¼
OIL CAKE, per ton	35 00	@ 37 00	32 00	@ 36 00
APPLES—Dried, Per lb	4½	@ 6	4	@ 5½
Dried Peaches—pr lb. South'n	6	@ 14	6	@ 14
Dried Raspberries, per lb	18	@	18	@
Dried Cherries, pitted per lb.			20	@ 22
POTATOES—Mercers, p. bbl	1 50	@ 1 75	1 75	@ 2 00
Peach Blows, per bbl	1 25	@ 1 50	1 87	@
Nova Scotia, per bushel	45	@ 50	55	@ 60
New Bermuda, per bbl			4 00	@ 4 50
ONIONS, Red, per bbl	1 50	@		4 00
White and Yellow, per bush	1 50	@ 2 50	4 00	@ 5 00
TURNIPS, Rutabaga, per bbl	1 00	@ 1 25	1 12	@ 1 25
STRAWBERRIES, South'n, p. qt	75	@ 87	50	@ 62
ASPARAGUS, p. bunch	37	@ 75	6	@ 10
RHUBARB, per 100 bunches			2 00	@ 4 50
RADISHES, per 100 bunches			1 50	@ 3 00
GREEN PEAS, South'n, p bbl.			2 00	@ 4 00

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
27 bus days *this* mon	287,634	174,601	531,820	17,152	25,251	301,377
27 bus. ds. *last* mon	150,672	7,549	230,395	9,582	26,169	124,342

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
27 business days *this* mon	367,385	910,500	952,500	53,100	156,900
27 business days *last* mon	260,580	488,250	727,000	69,000	167,000

The following is a statement of the movements of Cotton for the past week, and since the first of September last, compared with the five preceding years:

	RECEIPTS.		EXPORTS FOR PAST WEEK.		
	Past week.	Since Sep. 1.	To Gt. Brit.	To Fr.	Oth. F. P.
1859-60	31,000	4,277,000	58,000	1,000	21,000
1858-9	29,000	3,534,000	52,000	9,000	6,000
1857-8	53,000	2,830,000	32,000	15,000	9,000
1856-7	23,000	2,802,000	29,000	——	3,000
1855-6	45,000	3,280,000	33,000	10,000	5,000
1854-5	40,000	2,406,000	21,000	17,000	4,000

	EXPORTS SINCE SEP. 1.				
	To G Brit.	France.	Other F. P.	Total.	Stock.
1859-60	2,387,000	536,000	436,000	3,359,000	510,000
1858-9	1,667,000	377,000	486,000	2,530,000	450,000
1857-8	1,368,000	337,000	291,000	1,998,000	575,000
1856-7	1,224,000	354,000	354,000	1,932,000	340,000
1855-6	1,570,000	443,000	443,000	2,456,000	401,000
1854-5	1,185,000	359,000	214,000	1,758,000	325,000

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been well supplied during the past four weeks. Receipts 15,509, or an average of 3 878 per week. As fresh eggs are abundant, shad and other fish plenty, and new vegetables are arriving quite freely from the South, the demand for beef is not large, and prices continue low—about two cents ℔ ℔. lower than at this time last year. The highest prices of last year were obtained in May, when the average of all sales reached 11c. ℔ ℔ on two different market days. The highest average reached this year is 9c., which was obtained one week in February and two weeks in March—most of the averages for this year thus far, have been 8¼c@8¾c The present rates this week, May 16th, with 3,614 cattle on sale, are, Prime 9½c@10c; Medium 8½c@9c; Poor 7c@8c. General average 8½c per lb, estimated dressed weight, which is ¼c per lb. higher than four weeks ago, but the cattle of this week, are much better than those sent in last month.

Veal Calves continue to come in abundantly, faster than they can be sold at other than very low prices. The receipts of veals are always large at this season, but the numbers now ariving are in excess of last year's receipts. For the four weeks just ended, they amount to 5,084, which is an average of 1,271 per week. Prices have ruled low, and at the last market, good calves sold slowly at 5c@5½c per lb., live weight—a very few choice ones 6c—medium calves 4c@4½c, and poor ones 3c@3½c. Many small calves, less than a week old, are sold to fourth class butchers at $1 00@$1 50 each.

Sheep and Lambs have been rather scarce, the number received for the four weeks just ended, being 22,906, or an average of 5,726 per week. This is an increase over last month, and still larger numbers may naturally be expected, as the sheep are deprived of their fleeces and gain flesh after rearing early lambs. The demand is very good just now. At the last general market, May 16th, the stock was all sold, the best, with wool off, at from 5¾c@6c per lb., live weight, down to 4½c@5c for common and poor stock.

Hogs.—Receipts have been heavy of late, compared to the requirements of the market, when no more pork is wanted than can be sold fresh, and as Summer approaches, more mutton and beef are consumed to the exclusion of swine's flesh. For the four weeks ending May 16th, 23,345 hogs have been sent in. This is an average of 5,836 per week, and is more than have readily been sold. There was a surplus at the last market, when prime corn hogs brought 5½c@5¾c; Still hogs 5⅛c@5⅜c; Mast hogs 4½c@5c, and light stock hogs 6c@6½c live weight.

The Weather since our last report, (April 18) has been quite variable, and the indications of an early Spring were soon changed by cool wet weather. The crops have, however, been put in at about the usual season, and, for the most part, under favorable circumstances, although in some localities severe drought has prevented seed from vegetating, and injured the coming hay crop. The fruit prospect is good. The Winter was not so severe as to materially injure either trees or buds in many places, nor have late Spring frosts killed the blossoms or young fruit, except in very few localities. Fruit trees, of all kinds, have shown an abundant bloom in the country immediately surrounding this city. Our Daily Notes, condensed, read thus:—*April* 19, fine and warm with light rain at night—20, cloudy, with a little rain—21, heavy showers during the day and night—22, raining much of the day, peach trees in bloom—23, cloudy—24, clear and cool, Stuyvesant pear tree in this city, in bloom—25, cool with rain and snow squalls—26 to 30, clear, and fine growing weather. *May* 1, cloudy A. M., N, E. rain storm P. M., which continued until noon of the 3d—4 to 7, clear, warm and fine—8, cloudy, rain at night—9, cloudy, 10, light rain—11, and 12, warm, but mostly overcast—13, warm, clear, and cloudy by turns—14, heavy showers—15, clear and cool—16, 17 and 18, cool and cloudy, with occasional light rain.

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Thermometer at 7 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) *s* indicates snow; *r* rain.]

JANUARY, 1860.

1...... 8°	8......36	15......34	22......35	28.....22
2...... 7	9......33	16......34	23......37	30.....38
3.....12	10......36	17......34	24......32	31.....41*s*
4......24*s*	11......35	18......29	25......46	—
5......12	12......32*s*	19......32	26......34*s*	893
6......12	13......28	20......30	27......23	Av'age.29
7......29*r*	14......26*r*	21......38	28......24	

FEBRUARY.

1......10*s*	7......40	13......30*r*	19......19	25.....28*s*
2...... 5	8......30	14......41	20......18	26.....28
3...... 8	9......29	15......26	21......30	27.....33
4......23*s*	10......22	16......28*s*	22......35*r*	28.....41
5......22	11......16*s*	17......12	23......49	29.....36
6......42*r*	12......23	18...... 18*s*	24......41	Av'age.27

MARCH.

1......47*r*	8......38*r*	15......33	22......28*s*	29.....36
2......50	9......34*s*	16......32	23......26	30.....42
3......39*r*	10......31	17......36	24......36	31.....48
4......46	11......31	18......36	25......32	—
5......34	12......37*r*	19......41	26......33	1138
6......44	13...... 34	20......41	27......30	Av'age.37
7......38*r*	14......34	21......37	28......34	

APRIL.

1......53*r*	7......38	13......46*s*	19......42	25.....38*s*
2...... 33	8......43*r*	14......45*r*	20......48*r*	26.....36
3......30	9......50*r*	15......31	21......56*r*	27.....38
4......47*r*	10......45*r*	16......38*r*	22......42*r*	28.....44
5......49*r*	11......43*r*	17......42*r*	23......44	29.....46
6......45	12......42	18......41	24......45	30.....45

MAY.

1......44*r*	5......50	8......52*r*	11......56	14.....58*r*
2......47*r*	6......53	9......49*r*	12......56	15.....48
3......50*r*	7......56	10......54*r*	13......58	16..... 48
4......49				

Will the Coal-Beds Last?—The Philadelphia Ledger thus answers the question. The following is a table of the areas and solid contents of the coal-fields in the principal countries of the world, as given by Professor Rogers, in his "Description of the Coal-Fields of North Amercia and Great Britain," annexed to the "Government Survey of the Geology of Pennsylvania:"

	Square miles of coal area.	Total square miles.
United States	196,650	204,140
British Provinces of North America	7,530	
Great Britain	5,400	8,964
The rest of Europe	3,564	

The estimated quantities of coal in the principal countries are as follows:

	Tons
Belgium	36,000,000,000
France	59,000,000,000
British Islands	190,000,000,000
Pennsylvania	316,400,000,000
Great Apalachian coal-field (this name is given to the bituminous coal-field which extends through parts of Pennsylvania, Ohio, Kentucky, Tennessee, and Virginia)	1,387,500,000,000
Indiana, Illinois, and Western Kentucky	1,277,500,000,000
Missouri and Arkansas Basin	729,000,000,000
All the productive coal-fields of North America	4,000,000,000,000

A survey of the figures will serve to tranquilize any immediate apprehensions of a short supply of coal. It will be seen that, at the present rate of consumption, 100,000,000 of tons per annum, the coal-fields of Pennsylvania alone would meet the demand for 3164 years. If this consumption were doubled—viz., 200,000,000 tons—the Great Apalachian field would meet the strain for 6937 years. If it were quadrupled—viz., 400,000,000—the productive coal-fields of North America would suffice for the world's supply for 10,000 years to come. To this we must add the consideration that new coal-fields are brought to light as exploration becomes more extensive and exact.

Dr. Nordenskion, a learned Flemish traveller, who has just returned from a visit to the Arctic regions, announces that he discovered anthracite coal as far North as Spitzbergen. One of the most remarkable features of the coal system of the globe is, its liberal distribution over the northern hemisphere, where it is most needed; and it will probably be found in the still unexplored regions of Central and Northern Asia.

◆

The Editor of this Paper Missing.

As soon as the *May Agriculturist* was sent to press, the Proprietor left the office one evening, apparently in his usual frame of mind, and giving no intimation of a prolonged absence except a casual remark that "he had half a mind, for the first time in eight years, to leave the next (this) number for his associates to manage alone, except contributing two or three of his usual articles." We supposed he was merely thinking aloud, imagining, probably, how it would appear to take a seat outside the "sanctum" and watch the proceedings, as others have been surveying his labors so long. But, next morning, behold his seat in the office was vacant; the next and the following day passed and no Proprietor came. Four weeks have gone, but he still fails to show his face. Our fears for his safety have been relieved from time to time, as the printers have now and then received a little "copy" in his well known hieroglyphics. We therefore wish our readers to lay the sins of omission and commission in this paper to the charge of the undersigned—the responsible editor, being in this instance wholly irresponsible. If the June number be found not unworthy a place in the series, it will be gratifying to the friends of the *Agriculturist* to know that the corps of office associates and contributors selected by Mr. Judd, are equal to their work.

Associate Editors.

P. S.—Several farmers who come in from Long Island describe a somewhat noticeable looking man whom they have seen *at work* with a gang of twenty five to forty men, draining, digging, spading, planting, laying out new grounds, setting out all sorts of fruit and ornamental trees, shrubs, etc., etc., and going into "high culture" generally. The old style cultivators in the neighborhood shake their heads rather significantly. Some say he is "running things into the ground" especially with the drain tiles, which may be true. Others think he belongs to the class of modern "insane farmers" whom "too much learning has made mad." They say, however, there appears to be a "method in his madness," for he gives pretty good reasons for his operations. From the description of the man, we suspect he may be our missing editor, though from what they say of his sun-burned countenance, slouched hat, cowhide boots, farmers clothes, and the *way* he works, he would hardly be taken for the editor of a leading city journal. If this be he, we shall hear from him, for after he has finished his explorations in, upon, and probably under the surface soil, he will tell our readers what he found there.

Notes on Postage.

—o—

No Postmaster has any legal right to charge over Six Cents a year postage on the *American Agriculturist.* The paper is manufactured expressly with reference to having each number weigh a trifle less than *three ounces,* when weighed dry and without the wrapper, as the law directs; and the law is explicit that periodicals weighing not over three ounces, shall be charged one cent each, if sent singly, and only *half* this rate when the postage is paid quarterly in advance at the office where received.

Postage Stamps are convenient for remitting small sums; they should always have a piece of paper between the gummed sides, when mailed, to prevent their adhering together. *Ten cent* stamps are not so easily sold as 3-cent stamps, but can be disposed of in time. The 3-cent stamps are most desirable.

◆

Missing Numbers Supplied.

Any copy of the *Agriculturist*, failing to reach a subscriber through carelessness of the mails, will be cheerfully replaced without charge. Copies received, and afterwards lost or spoiled, will be supplied at the regular rates.

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Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

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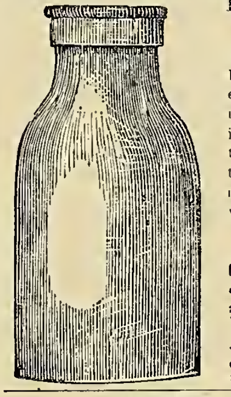

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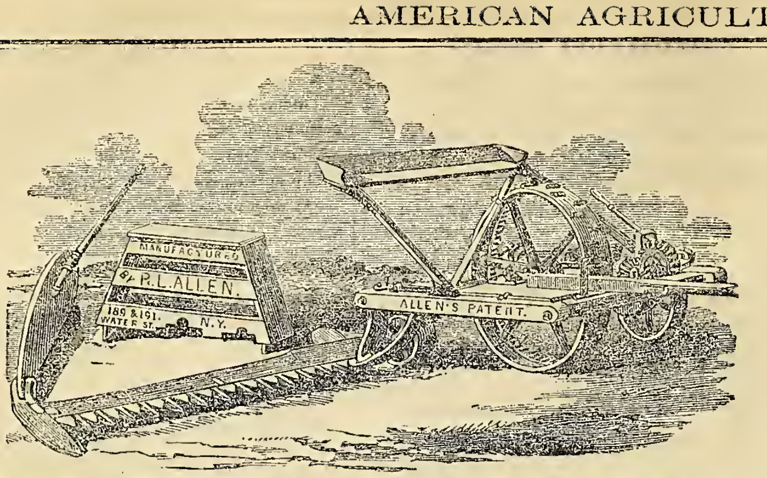

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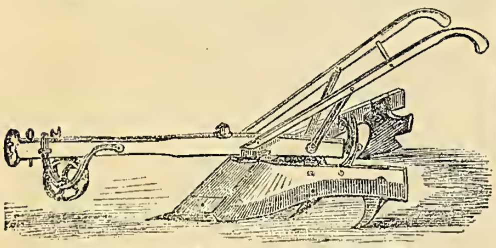

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4½ " "	18	" "
5½ " "	35	" "
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2 inches rise	$10	per 1000 feet.
3 " "	16	" "
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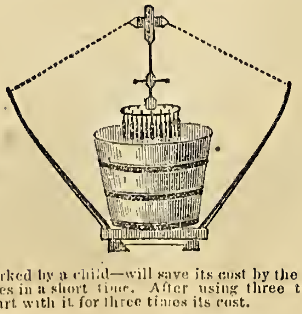

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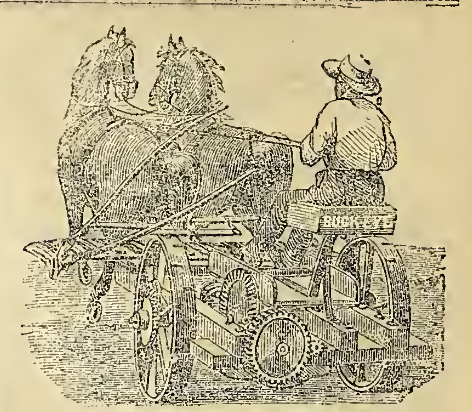

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WITH FLEXIBLE FOLDING BAR.

The farmer intending to purchase a Mower will find it to his advantage to examine the Buckeye for 1869, which combines all those features which have given it its present reputation, that of

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The most SIMPLE IN CONSTRUCTION.
The LEAST LIABLE TO GET OUT OF ORDER.
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With large wooden driving wheel,	135
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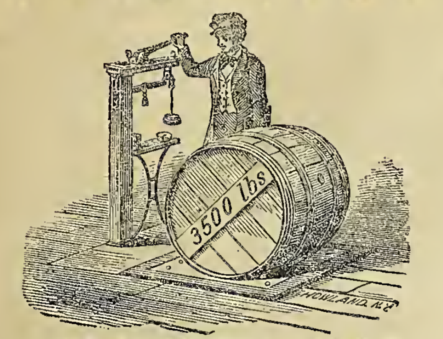

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kinds of Cake, without containing a particle of
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70 particle of Saleratus is turned to gas and passes 70
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Water and Seidlitz Powders.
AND **MAKE YOUR OWN SOAP** AND
WITH
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cheapest Potash in market.
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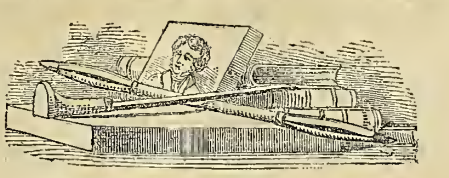

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THE READY FAMILY SOAP MAKER.

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For exterminating all kinds of Insects and Vermin in Field and Garden, Patented March 27th, 1860. By this discovery Coal Tar is wholly deprived of its viscid and sticky nature rendered perfectly clean to handle (it resembles fine gunpowder,) and made universally applicable, from the tenderest shoot to the full-grown plant, while its power as against the insect is very much increased.

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American Guano.
Bone Dust.
Superphosphate of Lime.
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For sale at lowest market price, and in quantities to suit.
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SUPER-PHOSPHATE OF LIME,
BONE DUST.

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* * *

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FILL UP THE VACANT SPOTS.

When the regular planting is over, there will be found on every farm, and in almost every garden, some vacant spots where a few turnip seeds may be scattered, and instead of a crop of weeds, there may be raised a lot of nice turnips for the table, as well as for feeding in Fall, Winter, and Spring. We have provided a small extra lot of seeds of three of the best kinds of turnips, which we now propose to offer as premiums to those who will procure and forward new subscribers. Viz.:

(No. 71) Long White French Turnip, as improved and grown by J. E. Macomber, Newport Co, R. I. This we have found the best table turnip, and the best keeper we have ever known. May be sown from June 1st, to August 1st. (See page 167.)

(No. 17) Red Strap-Leaf Turnip—a good turnip, and the quickest growing kind we have ever raised. It may be sown at almost any time from April to August, and comes quickly to maturity.

(No. 6) Ashcroft's Swedish Turnip—one of the best of the Swede turnips or rutabagas. May be sown from June 1st, to July 15th, the earlier now, the better.

To any person now sending a new subscriber, and $1, we will present, when desired, a *post-paid* parcel containing *one-eighth of a pound* of the seed of the above turnips. This quantity of seed with careful sowing, will suffice for 40 to 50 square rods, and yield from 50 to 200 or more bushels of turnips, the amount of crop of course will depend upon the goodness of the soil, the time of sowing, and the Autumn weather. The seed we will send post-paid except to the Pacific Coast and Canada. When to go to either of those localities, the recipient will need to send 7 cents extra postage for each half ounce of seed desired. (N. B.—If new subscribers are sent in as members of old or new clubs, and at club prices, the receiver of the premium will be expected to forward the postage on the seed, viz., 12 cents, if the full two ounces are desired.)

In addition to the above, an extra half ounce will be presented to the new subscriber himself, if the usual post-paid (3-cent stamp) envelope be provided for sending it in.

Premium Notice—Special.—When names are sent in on which any premium is desired, the sender should always give plainly the *number* of the premium expected. When this is not done, of course our clerks can not forward any premium, as they do not know what to send. This will explain the non-reception of premiums in a few cases which have already occurred.

* * *

New Premium--Portable Barometer.

It will be seen by reference to page 187, that our premiums for subscribers obtained for Vol. XIX (1860), are still open, so that those who have not yet completed their lists can still do so. It will be understood that these premiums are limited only to subscribers for the complete volume; that is, all names obtained at any time during the year, for the entire volume of this year, may be counted, in making up a list of names for a premium. We can not, of course, add together a few names obtaintained during different years ...Two half year subscriptions may be counted as one whole year.

A New Premium (No. 28) is also added this month, viz.: *Kendall's Aneroid Portable Barometer.* Upon the strong recommendation of Prof. Silliman, of Yale College, we purchased one of these instruments several weeks since, and have very frequently compared it with a costly standard mercurial barometer at Blunt's establishment. We find it remarkably accurate, and from what we have seen of this and other instruments of the same kind and manufacture, we are prepared to recommend them. The state of the atmosphere is shown by means of springs instead of by the troublesome mercurial column and cup, so that it is easily carried in any position, and is not in danger of getting out of order. A barometer indicating approaching changes in the weather, is almost as valuable to the farmer, as to the mariner, and we believe most farmers would find $10 well invested in purchasing one of those instruments. We shall keep an extra instrument or two on hand for premiums, and to dispose of to those who can not get them more conveniently from dealers

The General Seed Distribution Closed.

ITS EXTENT AND RESULTS—PREPARATION FOR NEXT YEAR—MISTAKES AND LOSSES.

The season is so far advanced that we can now close up our General Distribution of free seeds to subscribers for the present. This is very opportune for us, as the large demand has very nearly run out all our immense stock of seeds provided for this year—amounting to about a *quarter of a million packages!* This distribution has involved a great amount of care, labor, and expense, but the work has been voluntarily and very cheerfully done, and we shall, for the rest of the season, have the satisfaction of knowing that there are all over the continent, from Nova Scotia to California, Oregon, and Washington Territory, a vast number of plots of good vegetables and beautiful flowers growing, that would not be in existence but for the "*Agriculturist* Seed Distribution." And further, as most of these seeds are annuals, they will reproduce themselves the present year, and be redistributed to a multitude of other homesteads during the next season. So much for this year. We are already preparing for next year, as we are raising several varieties ourselves, and others are being grown for us; and we shall also import a large stock from Europe for free distribution in 1861.

A few mistakes have, perhaps, occurred in putting up so many parcels of so many kinds, though the most vigilant care has been exercised to secure all possible accuracy. And no doubt there have been some losses in the mails. But we trust these have been comparatively very few in number. Nothing that could be done to avert such mistakes and losses, has been left undone, and whenever apprised of the non-reception of seeds, we have always promptly made good the loss.

* * *

Can at any time be increased, by remitting for each addition, the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will, of course, be sent to added names

American Agriculturist.

(DISTINCT ENGLISH AND GERMAN EDITIONS.)

A THOROUGH GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; IN-DOOR and OUT DOOR work around the DWELLING; care of DOMESTIC ANIMALS &c. &c.

A full CALENDAR OF OPERATIONS for the season is given every month.

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Over SIX HUNDRED PLAIN, PRACTICAL, instructive articles will be given every year.

☞ The matter of each number will be prepared mainly with reference to the month of issue, and the paper will be promptly and regularly mailed before its date.

The Editors and Contributors are all PRACTICAL, WORKING MEN.

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ORANGE JUDD, No 189 Water st., New York

AMERICAN AGRICULTURIST,

ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN.—WASHINGTON.

ORANGE JUDD, A. M., EDITOR AND PROPRIETOR.

ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE. SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 7. NEW-YORK, JULY, 1860. [NEW SERIES—No. 162.

☞**Office at 189 Water-st.,** (Near Fulton-st.)
☞**Contents, Terms, &c., on pages 219-24.**

Entered according to Act of Congress in the year 1860, by ORANGE JUDD, in the Clerk's Office of the District Court of the United States for the Southern District of New-York.

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The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs.

July.

"Summer is here!
Amid the distant vales she tarried long;
But she hath come; oh joy! for I have heard
Her many corded harp the livelong day
Sounding from plains and meadows, where of late
Rattled the hail's sharp arrows, and where came
The wild north wind, careering like a steed
Unconscious of the rein. She hath gone forth
Into the forest, and its poised leaves
Are flat formed for the Zephyr's dancing feet.
Under its green pavilions she hath reared
Most beautiful things."—EDITH MAY.

All over our broad land, the Summer has come. It has been fully three months in its march from the coast of Florida and the Gulf to the fir clad hills and mountains of northern New-England. The flaunting corn leaves do not stand higher to-day on the banks of the Kennebeck than they stood on the first of April on the banks of the St. Johns, and the Suanee. But now we have one grand Summer day from the far North to the South, a tropical sun raging alike in the backwoods of Maine, and in the cane brakes and cypress swamps of the Delta of the Mississippi. Already her fairy creations begin to appear full robed, complete in outline and in their filling up. As June was a month of promise and growth, July is a month of fruition and accomplishment. The designs of the mighty stir of Nature in the earlier months, begin to appear. It is no longer doubtful what the springing corn means. It has struggled up through the blade, the thin yellow leaves, into rank lustrous stalks, luxuriant silken tassels, perfumed spikes, shaking their pollen upon the Summer air, and heralding the harvest. Hope changes into full assurance, and the farmer sees in the present aspect of his fields, that which shall be in Autumn, "some thirty fold, some sixty, and some an hundred."

Every where in field and forest, we see not only promise but fulfilment. The wheat, rye, and oats are already of full hight, or harvested. The clover fields are gorgeous with their red blossoms, and musical with the murmuring sounds of Hymettus. Here the meadow is burdened with timothy shaking its nodding plumes, and there, the red-top stretches away in graceful undulations like some discolored sea.

In the orchard and fruit yard, the apples are swelling rapidly, and the limbs begin to bend under their precious burden. The robins are gathered to their Summer feast in the cherry trees and among the currant bushes, levying their tax upon the garden, for their busy labors in destroying insects. The pears and plums are looking finely, and the melons are already studded with fruit.

In the forest, every leaf is busily at work, and showing the results of its labors in the new green shoots and in the enlargement of the growths of former years. In many cases, the terminal bud is already formed, and the two or three feet of new wood marks the whole growth of the season. The labors of Summer, henceforth, will be to consolidate and perfect what has already been marked out in the department of Nature's operations, as well as in that of human industry.

The month is somewhat typical of the present condition of the arts and inventions that propose to aid the husbandman. The tentative period is past, and we are beginning to realize in well made implements the great economy of *applying mind to husbandry*. It would be interesting, if we had the facts and the space to display them, to trace the history of the plow from the forked stick of the ancients, to the present deep tiller, or Michigan, turning under the sod and thoroughly pulverizing the soil to a foot in depth. The necessity of disturbing the soil was very early recognized, and the use of oxen for this purpose is as old as the Greeks. But very little progress had been made in this art until the last century, and the last thirty years have done more to complete this implement than all preceding time.

But the tool is no sooner perfected, than we begin to feel the need of a new agent of traction to supersede the dull gait of the ox, the mule, and the horse. The plowing of the sea by steam has suggested the plowing of the land by the same motor, and already the steam engine is linked to the plow, and marching over the prairies. The perfected clod-rasper, tearing up the soil to the depth of a foot or more, and comminuting it to the fineness of a garden seed bed, can not be very far in the distance.

The first conception of a hoe was doubtless suggested by a potsherd, or a clam shell fastened to a handle, to admit of the easier chopping off weeds and drawing the earth toward the cultivated plant. The hoe of the plantation, now in use in most parts of the South, is still of the potsherd pattern, better only in material, and in being furnished with an eye for the insertion of the handle. There is a long reach upward from that ponderous unwieldy implement to the light glittering steel blade and elegant turned handle, with which a Yankee dresses out his corn and potatoes. If the hoe is efficient in the human hand, it is still more so when applied by horse power. We have accordingly the sharp steel blades inserted in a frame, and made to be adjusted to a narrower or wider space at the will of the operator. A skillful hand with one of these tools and a horse, will till more corn or potatoes, than ten men with hoes alone. What an immense saving of manual labor this single tool would make, were it universally introduced.

The scythe and the horse mower are still seen in adjoining fields, and there is as great a disparity between them, as between the hand and the horse hoe. See the mower as he bends to his work among the thick grass from the early morning to high noon. There used to be poetry in his work before we knew any thing better, and we thought him a fitting type of the great destroyer. Who does not remember that august and horrible individual in the Primer, scythe in hand, and the couplet

"Time cuts down all
Both great and small."

That picture would now look like a weak conception of a very rude age, and we should seat old father Time in the car of a horse mower, rein in hand, with fiery skeleton chargers, sweeping down more victims before his remorseless scythe, than his prototype in the Primer ever dreamed of. We no longer hear music in the ringing steel, as the mower whets his blade or drives it through the falling grass. The contrast between the gentleman of leisure upon the seat, and the stooping laborer dripping with sweat, and panting in the Summer sun, is too great. The poetry is transferred from the scythe to the mounted car, and we hear music in the sharp clatter of its triumphant march. There is a beauty in the smooth evenly spread grass as it lies in the track of the mower, that we never saw in the roughly piled swath made by the scythe. It suggests no painful posture, no strain of the muscles, no sweat of the brow. Invention is at length consolidated into an effective machine, that puts the hay and grain harvests completely under the control of the husbandman.

So, in all the ingenious contrivances for saving labor in the field and in the garden, in the dairy room and in the granary, and, indeed, in every department of labor upon the farm we see substantial growth. So far as effectiveness in tilling the soil is concerned, one man has more power now, than a score of men had a hundred years ago. And the end is not yet.

The account given on a subsequent page of the inventions of agricultural implements during a single year, shows the attention given in this direction, and an increased number may be looked for in subsequent years. It needs that the intelligence of the cultivator shall keep pace with these improvements, that he may avail himself of the advantages they bring, and also be prepared to judge of the value of new implements offered: otherwise the best may die of neglect, and the inferior be purchased to his own detriment.

Calendar of Operations for July, 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45° ; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

Explanations.—*f* indicates the *first* ; *m* the *middle* ; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated ; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

Now the laborer in the field must indeed "eat bread in the sweat of his face." The vertical sun, with wilting force, reminds the mower that the grass falling before his stroke is a fit emblem of his own frailty. At no season is there greater danger of overtaxing the strength, and laying the foundation of disease, even if immediate prostration does not result. The hay must be secured, the harvest waves impatient for the reaper, and other operations will soon press for attention. It is well if the culture of hoed crops has been completed, and nothing but the appropriate work for the month remains to be done.

The husbandman may learn wisdom from the birds. They are astir with the earliest light, busy with work and with song, filling the fields with life. As the day advances, and the heat increases, they seek the shade, and remain quiet until the sun declines. Let the farmer imitate them. Lead the mowers to the field at break of day, and when the heat becomes oppressive, leave the sun to work for you, upon the mown grass. Then, when the afternoon breeze tempers the air, the work of securing will be performed with renewed vigor from the long midday rest.

Barns and Sheds—Complete preparations for receiving the hay and grain crops. Shelter, however rude, is preferable to stacking. Have the barn-yard cleared of manure, and platforms leading to the barn floor in order, that the heavily loaded carts may be run in easily.

Bees—Watch for second swarms, guard against bee moths, and follow other directions given under "Apiary" in this number.

Buckwheat—Sow, ff, to m, a half bushel to three pecks per acre on well worked soil. A crop may be secured from fields where corn has failed. It may be sown also where clover or grass has run out, to be followed by rye or oats, and reseeding next Spring, if the land is in good heart.

Butter—Greater care is needed to produce good butter during the hot season, but with a cool, well ventilated dairy room, and the use of ice when necessary, it can be made. Exclude flies from the milk-room.—Frames covered with wire gauze or millinet and placed in the doors and windows will do this, and allow free passage of air.

Cabbages for a late crop may still be planted. Set them ff, between rows of early potatoes, and other crops soon to come off, or on unoccupied ground.

Cheese—As warm weather renders butter making more difficult, cheese making will profitably take its place. Do not attempt to make butter and cheese from the same milk. "White-oak" stock is too plentiful in market.

Corn, sorghum, or other crops for soiling will be serviceable if put in, ff. That earlier planted should be entirely freed from weeds before haying commences. If they are kept down until the ground is well shaded, there will be little further trouble.

Fences—Keep in repair at all seasons.

Haying should commence with the proper maturity of the grass. By the use of the mower, horse-rake, and horse-power pitch fork, the greater part of the yield may be secured while in the best condition. If left until the seed ripens, the stalk becomes woody and loses much of its sweet and nutritious properties. Immediately after the blooming when the seed is just forming, is considered the best condition for making superior hay. If possible, allow no dew to fall upon hay in the swath, except that cut late in the day. Hay cured in the heap is better than when left exposed to the sun until perfectly dry. Cock it up when sufficiently dry not to ferment. Secure from rain with hay caps. Salt sprinkled on the mow occasionally as the hay is stored, will assist in keeping it in good condition, and render it more palatable, especially if of inferior grass, or not in good order when stored. In stacking, lay a good platform of rails and slabs to keep the bottom layer sweet.

Hoeing will need attention if not thoroughly completed last month. Improve poor hay weather by tilling plowed ground, and thus making good corn weather.

Manures—Weeds, coarse wild grasses cut from swales, etc., should not be left to rot on the ground. Cart all such refuse to the barn yard, and keep the pig pen supplied for increasing the manure heap. Apply plaster, chloride of lime, or copperas, one lb. to three gallons of water, to privy sinks, around sink spouts or other places where rapid decomposition of waste matter now gives out noxious gases. This will convert them into valuable manure.

Oats—Cut before ripe enough to waste by shelling. They will weigh heavier if gathered before dead ripe.

Pastures, if fed too close, suffer greatly from the scorching sun upon the almost unprotected roots. If too much stock is on hand, reduce the number, or make up deficiency of feed with cuttings from the soiling patch.

Poultry—Keep from grain fields, confining them to their enclosure if necessary. If left to run at large, the abundant supply of insects will incline them to lay freely. Collect eggs, and allow no hens to sit at this late season.

Potatoes—Dig early varieties as they mature, and sow turnips or plant out cabbages in their place.

Rye—Cut as soon as sufficiently ripe, and secure before injured by dew and rain.

Seed—Select the best parts of the fields of wheat, rye, or other grain, and leave to mature fully before being gathered. Remove all weeds before binding up, and when gathered, store it separate from the general crop.

Sheep—Keep in thriving condition by good range of pasture. Secure against dogs—visit and salt at least weekly. Read article "Sheep Raising" in this number.

Swine—Follow directions of last month.

Timber cut during this and the following months is generally considered more durable than when felled in Winter, particularly those kinds which abound in sap. If practicable, secure enough for next season's wants for fencing and building purposes.

Tanner's Bark—Hemlock and oak bark will "run" during most of July, and may be peeled at any time unoccupied by other labor.

Tools—Keep all cutting instruments well sharpened, and gearing of mowers, reapers, etc., well oiled. Repair implements needing it in the workshop, on rainy days.

Turnips—Sow for full crop, f, m, before the 20th if practicable, but later if necessary. Newly reclaimed land is most favorable for their culture. Make the soil rich, mellow and dry.

Wheat—Cut and secure the same as rye.

Orchard and Nursery.

Success in fruit raising requires first, a vigorous growth of the trees, and then a regulation of growth to induce bearing. The work of previous months, enriching the soil, loosening and keeping it in proper mechanical condition, and subduing weeds or other growth interfering with that of the orchard, if properly performed, will secure the first requisite. Attention should now be given to directing the energies of the trees to forming fruit buds for next year's bearing. This can be done by judicious pruning. If left until late in Autumn or next Spring, the benefits of removing superfluous wood are but partial, as we then take away that upon which the strength of the tree has been wasted. The orchardist needs, in this and other operations, to work at least a year in advance ; and he may do this with reasonable expectations of seeing and enjoying the fruits of his labors.

Birds are taking toll from the ripening fruit. Where they are very troublesome, choice trees will need some kind of protection. Small windmills, with a rattle attached, placed near the trees, will be of some service.

Budding young stocks of the plum, cherry, and pear will need attending to in the nursery during the middle and latter part of July. This operation will be found preferable to grafting, and is more rapidly performed.

Cherries—Pick later varieties now ripening, for market and for putting up in cans or bottles as described on page 214 of this number. Secure a good supply of pits for planting, and put them in earth before they become dry.

Fruit Stealers—Prevent their depredations by judicious liberality with fruit. Where this means fails, apply watch-dogs, and the force of the law.

Grafts—Examine occasionally, and keep coatings of cement in place, renewing if needed. Rub off superfluous shoots from the stock. Give support to rapidly growing shoots that need it, by tying to adjoining branches.

Hoe as often as necessary to keep down weeds, and loosen the soil. If severe drouth prevail, plow frequently between the rows.

Inarching may now be performed on both deciduous and evergreen trees.

Insects—Caterpillars, millers, slugs, aphides, the curculio tribe, and other depredators must be met with syringing with whale-oil soap, dustings with lime or ashes, hand picking and other appropriate means of destruction. The birds are busy paying for the fruit they take, by assisting in keeping them in check.

Layering can now be done with the growth of the present season on stools kept for propagation and on grape vines, flowering shrubs, etc.

Manure, ff, trees bearing a heavy burden of fruit to prevent exhaustion and consequent barrenness in succeeding years. Improve dry weather by securing an abundant supply of muck to be composted for future use.

Plow between nursery rows whenever needed to loosen the soil and destroy weeds. Avoid disturbing the roots.

Prune out limbs that crowd and chafe, and those that interfere with a well shaped head. Clean out all useless suckers around the trunk or upon the limbs. Make all cuts close to the stock and pare perfectly smooth. When large limbs are taken off, cover the wound with grafting cement, or gum shellac dissolved in alcohol. To induce fruit buds on trees growing to wood, pinch off the ends of the rampant shoots. If this be judiciously done year by year, and superfluous growth is removed in the same manner when first formed, there will be little need of further pruning, and less injury will follow than from the excision of large limbs.

Thin fruit on overbearing young trees, and prop up the branches of older growth when heavily loaded. By removing part of the fruit, the remainder will be of finer size and quality. Trees reset this year should not be allowed to fruit, save, perhaps, a few specimens.

Weeds are out of place above the surface, return them to the place whence they sprang.

Kitchen and Fruit Garden.

The previous labor bestowed here is now rewarded with an increasing variety of delicacies of the season. To make the most of the ground and bring ripening vegetables to early maturity and highest excellence, require watchfulness and pains. Weeds and insects are ready to cut off the gardener's plants and hopes ; crowded roots are struggling for room ; and tender plants droop for water if there be drouth. There are also early vegetables to be gathered and their places to be supplied with seeds for late Fall use.

Asparagus—Make no more cuttings, but allow it to mature and thus strengthen the roots for the following year. Keep down all weeds.

Beans—A few of the quick growing kinds, as Early Valentine, Refugee, and China, may still be planted, ff. Such as are not sufficiently hardened in the Fall to keep, may be preserved in cans.

Beets for winter use will come on in season, if sown ff, and well cultivated. Continue to weed and thin former plantings. Leave them standing eight to ten inches apart in the rows.

Blackberries—Keep the canes tied to stakes or trellises, and support branches heavily loaded with fruit, to keep from splitting down. As the new shoots push forward train them to the trellis.

Cabbage and Cauliflower—Set out, ff, m, for latest crop. A little care in transplanting will save the growth of one or two weeks. In gathering early cabbages for table use, cut them off and leave the stumps in the ground ; the new growth of sprouts will furnish excellent greens.

Celery—Plant out for late crop, ff, as directed last month. Hoe former plantings frequently.

Corn—Plant ff, for latest use, and for drying and preserving in air-tight vessels. Hoe lightly around that grown two feet high or more, to loosen the surface and destroy weeds, but not to disturb the roots.

Cucumbers for pickles may still be planted, ff, m. Continue to hoe former plantings and destroy insects.

Currants—Gather for making jelly when first ripened. If left too long, much of their gelatinous principle, (vegetable albumen), changes to sugar, and jelly is formed with difficulty, and will "candy" when kept for a few months. Leave those intended for preserving whole, until fully ripe. To increase the size of specimens, pinch off the ends of the shoots an inch or two beyond the fruit.

Egg Plants—Though rather late now for setting out, if transplanted, ff, on good soil, and hastened forward by frequent hoeing, and occasional applications of liquid manure, they may succeed.

Endive—Set out, ff, for late use, and sow seed at same time for winter crop.

Gooseberries—Thin out the berries if the bushes are well filled, using the first pickings for cooking. The remainder will be of superior size and quality.

Grapes—Remove all superfluous growth, and continue to pinch off the ends of bearing shoots, leaving four or five leaves beyond the clusters. This will save future cutting of the vine, and allow the strength to go to the fruit, and to promote vigorous growth of wood for future bearing.

Herbs contain most of their valuable properties when in flower. Cut when first blooming, and dry them in the shade. Rub off the flowers, and keep them from the air in bottles or cans.

Hoe often to loosen the soil and destroy weeds.

Insects—Grubs, striped bugs and squash bugs are still troublesome and must be looked after. Visit the vines early in the morning, and destroy bugs by hand. Plant additional seeds about the hills of vines occasionally, to feed insects escaping observation; they will choose the young growth. These superfluous plants can be removed when the insects have gone. Salt sown upon land devoted to cabbages, say three or four bushels per acre, will, it is said, prevent the ravages of the cut worm.

Lettuce—Keep up a succession for the table by sowing, f, m, l. The Silesian variety is recommended for late use.

Melons for mangoes may be planted, ff. Hoe those planted early. Pinch off the ends of long straggling vines to increase the yield of fruit.

Mushrooms—Collect necessary materials for Autumn beds, m, ll.

Onions—Keep free from weeds, and the soil around them well lightened. Examine for the maggot and try sulphur or other applications to repel them. Experiments are needed to find a certain remedy. Sow seed, ll, for half grown bulbs (pips) to be set out next Spring.

Peas sown, ff, will be in season for late use, and less infested with weevil.

Potatoes—Harvest early varieties and devote the ground to turnips, late cabbages, or other crops.

Preserving Fruits and Vegetables—Commence with these as they mature, and continue through the season. For directions read article in this number, page 214.

Radishes—Seed sprinkled among corn, cabbages, etc., after hoeing, will give continued succession.

Raspberries—Pick daily as the fruit ripens. When the fruiting is passed, cut down old canes of last year's growth, and train the young sprouts to stakes or low trellises for next year's crop. Remove weak spindling shoots, leaving two or three of the strongest canes. If a further supply of canes is wanted, superfluous shoots may be left and removed in the Fall.

Rhubarb—Gather for preserving in bottles or for wine making. Many stalks near the center of the plant are still serviceable.

Seeds—Gather Turnip, Cabbage and other seed now ripening. Dry with care, and label for another year. Turnip seed of this season's growth will answer to sow now.

Spinach—Sow, ff, m, for late use. Allow a sufficient number of plants from early sowings to remain for seed.

Strawberries—The finest fruit is produced by culture in hills. Clip the runners as they appear, and keep the bed free from weeds. If beds need replenishing, mark out sections two to three feet wide, manure with leaf mold, and a little stable manure, dig it in deeply, and mix well with the soil. The rows left, will send out runners and cover the new sections. The older portions can be renewed in the same manner the following season.

Thin out all beds or hills where plants are crowded, and remove late setting fruit from vines.

Tomatoes—Train to trellises or upon frames. They may be supported by brush as for peas. Nip off the ends of the vines after sufficient fruit is set. Allow only so much as will ripen before frost, except where green fruit is preferred for pickling.

Transplant to fill vacancies in hills or rows. By observing directions given in previous numbers, any plant not too large can be removed with little injury.

Weeds are best raised by pulling them out of the ground; or *raze* them to the ground with the hoe.

Winter Cherries—If additional plants are wanted, take cuttings from those growing, and set the same as for transplanting. Shade and water moderately until they root.

Flower Garden and Lawn.

The cool and dry weather of the last of May and first of June delayed the flowering season a little, but rains and the warm sunshine during the latter part of June have made ample amends and covered the lawn with a thick velvety growth, and the flower borders with a profusion of bloom. Perhaps no month in the year is richer in flowers than July. Some of the early plants have finished their blooming season, but there are many of the perennials still in flower, while the borders are gay with the bright colors of a host of annuals, if well kept, otherwise they give little pleasure to the owner or others. Not only will the flowers continue longer in bloom, but they will be far prettier if allowed ample space to develop themselves, and the ground is well stirred and kept free from weeds. A favorite plant can be kept in flower much longer than its ordinary period, by watering it frequently and shading for a few hours in the middle of each sunny day. A piece of muslin tacked upon stakes makes a convenient screen.

Everything is now growing rapidly, and especially among the trees and shrubbery should the knife be used freely. Almost any shape can be given to a tree or shrub by Summer pruning. A compact, stocky head is much better than a long straggling growth. Nip off the aspiring shoots and side branches will push out to form this desirable head. This pruning need not be confined to deciduous trees alone. Even evergreens are found to bear judicious clipping, not only with impunity but with manifest advantage.

Annuals of quick growth may still be sown, ff, to take the place of early blooming plants. The most of them will flower before frost, even if they do not ripen seed. They will also help to lengthen out the floral season.

Bulbs—Those which are to be reset, should now be lifted, dried, and put away in drawers or wrapped in papers and carefully labeled. It is not necessary to transplant them every year.

Carnations, Picotees, and Pinks—Layer, ff, m, selecting a rainy day or water the plants at the time of layering. Cuttings can also be put in at the same time. There should now be a fine show of bloom. Some of the flowers will incline to burst upon the side and give an imperfect bloom. This defect will be remedied by splitting the sheath with a knife, or clipping the top of the cap.

Dahlias—It is not too late to set out plants started last month in pots or otherwise. Prune side branches and firmly stake and tie tall plants. A single stalk is sufficient to leave in a place.

Evergreens make much of their growth in July, and are particularly ornamental at this period. No lawn or ornamental ground is complete without a collection of them, beautiful at all seasons and fine for the "Winter garden." This is the appropriate season to prune them. If to make stately trees leave the leader uninjured, but when desired to form shrubs, both the upright and principal side shoots may be pinched in to advantage.

Flower stalks are unsightly after completing their bloom. Cut them away unless seed is wanted, and plant annuals to occupy the space.

Geraniums are in full flower, and if well arranged, make a fine show. The Tom Thumbs answer admirably for bedding out. Both layers and cuttings may now be made.

Gravel—Keep free from weeds and well rolled. Pull out the weeds, or use the scuffle hoe. Some apply salt to destroy the weeds, but it requires too thick a coat. A machine has been invented which forces a jet of steam upon the weeds as it passes over them.

Hedges—The first clipping should be finished, ff. Cut evenly and to a line upon the top leaving them a little cone shaped. Do not trim from the sides near the bottom at this season, as the object now is to thicken the hedge. Thin places can soon be filled up by judicious pruning.

Hoe grounds often. Even if there are no weeds, the soil should be frequently stirred with a hoe or rake, to prevent crusting. Use a push hoe and walk backwards which will leave the weeds loose upon the top without any footprints.

Insects—Look after and destroy the rose slug as directed last month. The leaf hopper dislikes the odor of the soap mixture.

Leaves and Grass Edgings need shearing every fortnight during this rapid growing weather. Pare evenly, but not too closely and rake off at once.

Layering—This is a favorable month to layer many plants, vines, etc. The present season's growth may be used, and if put down early in the month, roots will probably be formed, and layers may be taken off another Spring.

Manure may be applied to the lawn, or to any plants which are not growing thriftily, by first dissolving it in water. Poultry droppings or guano, treated in this way, make a powerful fertilizer. Only one quart of guano should be used to 8 gallons of water.

Potted Plants—Some of these remain in their pots, and were only brought from the houses for a few months sunshine and fresh air. Whether sunk in the earth, or standing upon the ground, the pots should be turned around occasionally, else the roots will penetrate through the hole at the bottom and fasten into the soil. They will also require more water than plants growing in the open ground.

Prune freely, but judiciously. Remember the object now is to give shape and thickness, and to develop flower buds. Nip off frequently rather than prune seldom and heavily.

Rhododendrons are still in flower. Water freely and keep the soil well stirred about them.

Roses are still in full flower and fragrance. This is the proper season to bud and layer in order to change the variety and increase the stock. New growth, layered now, will root sufficiently to be removed another Spring. Keep pillar and climbing varieties tied to stakes, or trellis. Use the oil soap solution freely to destroy slugs and leaf hoppers. Even the rose bug evidently dislikes the odor. Prune those trained as standard or tree forms, and head back pillar and climbing sorts.

Salvias make a good show of bloom at this season. They can be pegged down and spread so as to form a dense mass of flowers.

Seeds—Collect any of the early varieties now ripening.

Stake or otherwise confine all tall growing plants liable to be broken down by high winds.

Thin plants requiring it, remembering that a shrub or flower can not fully develop itself when crowded. Beginners usually leave them too close.

Transplant the remainder of the biennials and perennials sown last month. Some of the annuals may be set out to take the places of flowers already faded.

Verbenas—These admirable bedding plants now show a mass of bloom if properly arranged, and spread by layering and pegging. The beauty is to have a mass of flowers and foliage hiding the ground beneath.

Verbenas—Increase stock of Fall blooming plants by layering.

Water any plants needing it during dry weather.

Weeds—Keep down by frequent hoeings.

Green and Hot-Houses.

As most of the plants have been taken to the open grounds where the care of them comes more appropriately under "Flower Garden and Lawn," we have very few directions to give, relative to the houses. Some of the tropical and other plants over which it is needful to have perfect control, are still in houses especially devoted to them, but, for the most part these houses have both doors and windows open day and night, except during stormy weather. The glass of such houses should also be corrugated, or coated with some substance to break the direct rays of the sun. Frequent syringings and waterings will be necessary to keep the humid atmosphere suited to many of these plants.

Budding may now be performed upon many of the woody plants.

Callas—Repot towards the latter part of the month, watering less freely.

Cissus, and other trailing, or climbing plants should be arranged in suitable positions for training. They should be near the glass.

Cuttings of a large number of plants may be made, ff, m. Insert them at once in pots of prepared mold.

Earth for Potting—Provide a good supply and have it well mixed against a time of need.

Grapes—Some of the houses have already ripened their crops and the plants should be checked in growth preparatory to a period of rest. A dry atmosphere, and dryness at the root will soon check their growing. Those plants which have received less forcing will need some attention now. The ends of bearing shoots may require still further pinching in, and some of the clusters should be thinned again. Water and syringe freely. Use sulphur upon the first appearance of mildew.

Insects of all kinds need especial looking after now. The whale-oil soap solution will prove sufficient in most cases, although it may sometimes be necessary to resort to tobacco fumes.

Layer and inarch many of the woody plants to increase the stock, ff, m.

Oranges and Lemons, whether in or out of doors should be budded, ff, m. Water bearing plants freely, and thin fruit as may be needed.

Potting should be prosecuted vigorously during this month. Large numbers of the seedlings are now crowded for room. If possible, put them in pots of a blooming size at once.

Prune plants, ff, m, to bring them to a good form. In some of the plants the old wood requires cutting away to renew the growth.

Seeds—Gather any ripening, and save with care, or plant at once.

Water—Give copious supplies during the warm, dry weather of this month, sometimes both morning and evening. Wash freely with a syringe.

Apiary in July.

BY M. QUINBY.

Nearly all of the best quality of surplus honey will be stored this month. Give close attention to the boxes. Do not neglect any stock or swarm that is crowded for room. Only a few days neglect now, may reduce the amount of surplus one half—bees will often continue to work in a box, while honey is failing, when they would not make a beginning at such time. All boxes should be removed as soon as filled, and empty ones put on in their places, as long as honey is being stored.—Combs remaining in the hive after being finished, grow darker. If honey is abundant, and enough boxes are not furnished, the bees lose time for want of room. The boxes, when removed, should be placed so as to keep the combs perpendicular, otherwise the weight of honey may crush them. If the bees are getting honey abundantly, the boxes may be set a foot or two from the entrance to the hive, for the bees to leave them—keep from the hot sun. If honey is somewhat scarce, the bees will take away the honey left in this way. In such cases, the boxes as they are taken off, may be put in an empty barrel or box, and covered with a thin cloth ; turn this over occasionally as the bees gather on the under side, they will easily be got rid of without much loss of honey.

In districts where foul brood prevails, all old stocks should be thoroughly inspected. No matter whether one or ten years old, or whether they have swarmed or not—examine all—if diseased drive out while there is yet honey to be had. Three weeks after the first swarm, is the *best* time for examination, as well as transferring, but *do it at other times, rather than neglect* foul brood. Look out for the moth worm in all weak colonies. Set shallow dishes containing sweetened water about the hives at night to trap the moth Any stock or swarm, with too few bees to cover the combs properly, will be likely to be destroyed, or very much injured. When all the attention that you can give, is not likely to save the contents of the hive, it is best to secure what there is at once, rather than breed moths to infest other hives.

Queenless stocks can often be supplied after it is too late in the season to obtain cells from swarming hives, by introducing a small colony (one that could not prosper alone) with its queen. Sometimes you can not dispose of a colony from a diseased stock, better than to supply a queenless stock. Keep all colonies, young and old, strong, if possible; they are much less trouble, and safer from all their enemies.

Scientific and Practical Talks About Manures.....VI.

(*Continued from page* 167.)

Muck, Peat, Swamp mud, and black earth, are terms applied to organic materials found in greater or less quantity upon nearly every farm in the country. These substances are all valuable as fertilizers, and are eminently worthy the attention of cultivators. Muck, peat, and swamp mud, are similar in character. They consist of partially decayed vegetable fiber—mosses, leaves, stems, and roots—mixed with more or less of soil. The purest peat or muck is one that contains the least earthy matter. Peat and muck are very similar ; and both terms are often applied to the same material. The word *peat* usually refers to deposits where the vegetable fibers are long and cling together with considerable force, so that the material can be cut into blocks, like hay in a well compressed mow ; while the word *muck* is more particularly applied to deposits of vegetable matter in a state of fine division. Muck, when dried, can be broken or crumbled fine, but true peat must be cut into small pieces and rotted before it can be crumbled. By swamp mud, or black earth, is meant a mass made up of muck or vegetable fiber, rotted fine and mingled with a considerable quantity of soil.

The surface earth in forests is usually called woods mold, or simply mold. In old forests this is often nearly pure vegetable matter, being composed almost wholly of decaying leaves, but usually it is in part washed into and mixed with the surface soil. This is also a valuable fertilizer, and is highly esteemed by gardeners and cultivators of trees, plants, and flowers. It is this organic deposit that makes new land so fertile. For centuries, the trees gather from the air a large amount of organic matter to constitute the leaves, which annually fall to the ground, and being shaded they do not decay rapidly, but a portion is every year left, and partially protected from further decay by the new surface deposit of leaves. Few farmers are aware of the amount of fertilizing material they could add to their cultivated fields by annually gathering all the leaves in these woodlands, and plowing them under, or what is better, mixing them with the manure. The leaves falling upon an acre of woodland, if gathered and composted with just manure enough to rot them, and then spread upon an acre of plowed land, would greatly enrich it, and pay a hundred per cent for the time and cost of gathering, and applying. The mold (leaves already partially rotted) should also be gathered. Successful gardeners, florists, and propagators of plants, who seek the best fertilizers, do not hesitate to gather this material and cart it many miles, to be mingled with loam in the preparation of a soil most suitable for their use. Let farmers take the hint, and go to their forests near at hand for fertilizers, instead of sending, or paying for sending vessels on a voyage of twenty thousand miles to Peru or the Pacific Islands.

Grass sods are similar in character and value to muck. The other day we asked an intelligent neighbor to sell us the privilege of cutting a lot of sods on an upland pasture. "No," said he, "these grass sods I find to be my cheapest source of manure, which is a scarce article. Whenever a piece of land is good enough to bear the operation, I take off a layer of sods and compost them with manure to be spread upon poorer fields." We could but admire his wise forethought.

But still more important are the peat and muck beds, which are accessible to three-fourths or more of all the farmers in the country. True peat is not so generally found, but deposits of valuable muck, or swamp mud, or at least of black mud or earth, are to be found on almost every farm. If there is not a swamp, there are at least low spots, where the water from higher ground has washed in and deposited black earth. These deposits may cover only a few rods, and be only a few inches in depth, but they will still supply many loads of organic material which should not be neglected, so long as there is a single field or garden plot not enriched to the highest state of fertility. The influence of a small quantity of organic material around the roots of a plant will be better understood when we come to speak, further on, of the mode of applying fertilizers.

On the fertile western prairies, there is a surface layer of vegetable matter, varying in depth from a few inches to several feet. Where there is too much of it, the land is too light for good crops, and prairie lands generally are improved by plowing deep enough to bring up and mingle with the surface some of the compact soil underneath. The effect may be injurious the first year, owing to the character of the soil, but it will be quite otherwise after air and frost have done their work upon the subsoil thus brought up.

There are muck deposits in the valleys of all uneven localities. They abound in New-England, and in these alone there are fertilizing materials enough to enrich the whole of that region for ages to come. The same may be said of many other similar localities, of moderate extent, over the whole continent. And these organic deposits are so numerous that they are usually accessible at small cost to those who have nothing of the kind on their own farms. The valleys of all rivers and streams which overflow their banks during part of the year, are more or less supplied with organic matter, frequently in such excess that a portion of it may be removed for use on higher land.

Let it be kept in mind, that all plants are composed essentially of the same few elements, and, consequently, that all materials produced by the decay of plants of any kind are the proper food of all other plants. So all these black earths, produced by the decay of the roots, stems, and leaves of grasses, etc., are valuable as fertilizers.

Treatment of Peat, Muck, etc.—To be prepared for plant food, a substance must go through a process of decay ; that is, its elements must separate from each other, so as to be taken up in minute portions by the small roots or pores. The reason why peat and muck remain undecayed is that the presence of water shuts out the access of air and warmth, both of which are necessary to decomposition. Further, after partial decay under certain circumstances, the vegetable fibers of peat and muck become coated with tannic acid, or with a species of asphaltum, or pitchy matter, which resists the action of the air, and prevents its access to the inner portions. The proper treatment then, is to place these substances where they will be exposed to air and warmth, and to apply an alkali (lime, potash, or soda) to dissolve the asphaltic coating.

A description of our own practice the present year will explain our theory of the best mode of treating muck. Two miles distant is a low swampy locality, where the black peaty muck is from two to ten feet or more in depth. In connection with a neighbor, we have bought some of this land, at a cost of more than $100 per acre. The muck averages at least 3 feet deep, so that an acre will furnish fully 5,000 cubic yards, or one-horse loads, making the cost only about 2 cents a load, if we allow the land to be worth nothing after the muck is removed.

During the dry weather of July and August, a quantity of this muck will be dug out and removed to higher land. Some of the dryer portions will be taken to the barn yards and piled up under cover to be used as bedding, and to mix with the manure and absorb all the animal urine. While being piled up, a small quantity of lime will be intermixed, so as to partially prepare it for quick decomposition, when composted with the manure. When this addition of lime is made, a much larger quantity can be put in the compost heap, without checking fermentation, and at least five loads of it can be added to each load of manure in the compost heap, and thus there will be six loads of good manure instead of one. The absorption of urine and the retention of all escaping gases, together with the elements of the muck itself, will render the whole mass about as good as the manure itself would be without this composting.

Probably 31 cents per load will pay for getting out, carting, and liming the muck, making the cost only 33 cents per load for a good manure. This is one third the cost of the poorest yard manure, or street manure which is largely brought by the sloop load from New-York city to our vicinity. In most places the muck and lime can be obtained more cheaply than the above figures, as we have allowed for hauling it two miles.

Another portion of the muck will be mixed with a larger amount of lime—enough to decompose it—and left to rot, ready for application directly to the land as needed. It might be applied directly to warm soils, without lime composting, but its action would be slower.

We may add, that unleached wood ashes are quite as good as lime to mix with muck, where the ashes can be obtained cheaply. We have no accurate experiments to be governed by, but we estimate a bushel of good ashes to be worth quite as much as a bushel of lime. The ashes contain less alkali, but the alkali is mostly potash, which by reason of its solubility is more thoroughly diffused through the muck, and acts upon the whole mass.

When lime is used, it should be fresh slaked, and in a powdered condition. It should also be thoroughly mixed through the muck. If only put in alternate layers, as some direct, it soon becomes carbonated from the carbonic acid in the air and that produced by the decay of vegetable matter, and the carbonate is insoluble. This, however, is in a measure counteracted, for the excess of carbonic acid produced during the fermentation, will probably change it to a soluble bi-carbonate of lime. When placed in a compost heap with manure, or lime, the muck should of course be damp, even wet, to promote the diffusion of the alkali, and the general fermentation.

In concluding this chapter, let us advise every cultivator who wishes to make his land more productive—and who does not?—to go muck-hunting over his land this very month—and if no deposits of black earth can there be found, to extend the search through the neighborhood, and buy a privilege in some muck deposit. Then, during this month and next, have a *large* supply of the material dug out and placed where it will drain out, and be accessible at all seasons. It can be carted and mixed with the manures in the stables and yards, at a time when the teams are at leisure.

We know a man who has a lot of pond mud, but it is always covered with a foot or two of water which can not be drained off, owing to high land on all sides. As soon as the water is at the lowest point in Summer, he has several men engaged with a large raft or flat boat. They dig out the mud with long shovels—sometimes standing knee or waist deep in the water with a plank sunk under them to keep from miring—it is then floated to a convenient place where the bank of the pond is a foot above the highest rise of the water, and the mud is then thrown up and left for future use in the barn yard, stables, and compost heap. He has pursued this plan for several years and finds it pays largely in increased crops.

Probably, in most instances where the ground is soft and miry, the better plan is, to throw the muck up into high heaps, and leave it to drain and dry until the ground is frozen hard, when the carting off can be readily done. The circumstances—the nature of the ground, the distance to be carted, the amount of spare man and team labor at any season, etc.—must determine the best mode of procedure in each case ; but we say to one and all, lay in a large stock of peat, or muck, or pond mud, or black earth, during the coming dry season ; and our word for it, you will get good returns when you apply it abundantly to your cultivated fields.

A Word for Buckwheat.

To the Editor of the American Agriculturist :

I have had great faith in Buckwheat ever since I was a boy and loved the smell of the fields where it was in blossom, and of the steam that came from the kitchen on cold frosty mornings when the cakes were baked and the door was opened to call us in to breakfast. I don't know what some of my neighbors would do without it. We live in a rather wet district and it takes our land until late in Spring to drain out enough to plant corn, except in fields where we have put in the pipes for it to run through, as the *Agriculturist* has recommended. When the season is very backward, it is of little use to try to put in common kinds of corn. It comes up as yellow as it was put in, and never gets over the jaundice enough to bear half a crop. I suppose it's owing to sleeping so long under a wet blanket, and feeding on cold sour stuff in the soil. Sometimes it happens that plowing can't be done until the right time for planting is gone, unless one is willing to turn over a stiff wet soil that cuts like cheese, and falls in great dead lumps, which might answer for building walls, but are no better than bricks to nourish corn roots. So when a man gets behind the times for corn planting, or his yellow corn makes the prospect for a crop look blue, he waits until July and turns all such land over for buckwheat. I have thought this arrangement a little too convenient for thrifty farming, because some take little pains to push their Spring work ahead, calculating to cover up their neglect with a large patch of buckwheat : some farms in this neighborhood will be pretty well patched in that way this year.

But I find a good account in raising a few acres of this grain as a regular crop. It pays to manure the ground well and to work it deep before sowing. This is kept, like knitting work, to be done at odd spells between first and second corn hoeings in June, and whenever nothing else is pressing. During the last of June, or early in July, the ground is harrowed thoroughly, and the weeds are soon roasted out by the hot sun. Then, if possible just before a rain, I sow about three pecks of seed to the acre, harrow it in, and if the season is favorable, by the middle or last of September, there are twenty five or thirty bushels per acre to harvest, and sometimes even more than this. I think a crop or two of buckwheat, followed by corn, one of the very best remedies for Canada thistles, daisies, wild onions, and such troublesome weeds. The buckwheat starts so quick and shades the ground so completely, the weeds get discouraged, and a well tilled, hoed crop finishes them. Of course land so treated must be well manured—you can't get fat cuts from lean fields. JONATHAN.

Legislating the Weeds Out.

On May 14th, the Montgomery (Pa.) Agricultural Society appointed a "Committee on Noxious Weeds," consisting of Charles J. Elliott, Alan W. Corson, and Thomas P. Knox. This Committee reported at a recent meeting, and there are two or three important suggestions, which we will extract :

"....We have had under consideration the propriety of asking the Legislature for a law, the provisions of which might be as follows, viz. : That all incorporated companies, such as railroad, turnpike, and canal, should be required to keep their roadways through cultivated farms clear of certain noxious weeds—viewing as we do these thoroughfares oft-times as nurseries of weeds throughout their whole extent.

Also, that it should be made the duty of the township Supervisors to keep the township roads free of such Weeds.

And that it should be made the *duty* of every rightful owner or occupant of property to keep from going to seed, and even eradicate all such weeds upon said grounds. For neglect of these duties the penalty might be moderate—say $5 with costs."

[These suggestions seem very appropriate, and we do not see why the Committee should come to the conclusion, in the next paragraph, not to recommend any stringent measures at present. Are not farmers, everywhere, sufficiently enlightened to see the importance of at once preventing the growth and distribution of noxious weeds that are everywhere springing up along the lines of railways completed or being constructed in different parts of the country. Shall we "wait until the horse is stolen, before locking the door"—wait until the weeds are thoroughly established and propagated, before adopting stringent measures of prevention? A stitch in time will here save ninety nine. We commend the action proposed above, to the early attention of all other Agricultural Societies, general and local.—ED.]

"But while your Committee themselves may be fully satisfied of the legality and sound policy of such laws at some *future time* as would have a tendency to eradicate the most offensive weeds, we are scarcely prepared at present to recommend any stringent measures, until it is thought an enlightened state of agricultural knowledge had prepared a public sentiment necessary or proper to enforce their observance. Our Agricultural Societies and Journals are fast preparing the minds of the people for such measures as may prove partially effective.

In the meantime, we would most earnestly recommend that every agriculturist take early and most efficient steps toward eradicating all plants not properly the subject of cultivation. Webster defines a weed to be a "plant out of place ;" although in the economy of nature some of them are of use medicinally, we cannot but regard them as *out of place* upon our cultivated farms.

We would recommend that no farmer permit a Weed, under any circumstances, to go to seed upon his property. Before and during hay-making, see to it that no Weed in even a half ripe condition be so placed that the substance in the stalk or body of the plant may, in the barn or elsewhere, cause the seed even partially to ripen or mature. We are well satisfied that many, very many weeds, which at mowing, in their unripe condition, we consider not likely to give us annoyance, are thus taken to the barn in the new made hay, ripen in the mow, pass through the stables and manure heap, and are returned to the field, where in time—immediate or remote—we are astonished to find them in abundance, and wonder whence they came. We are assured by careful Weed pulling farmers that they can, in no other way than this, account for the present abundance of that most pestiferous Weed, the Moth Mullein.

Very many farmers are in the habit of hauling hay to the city and boroughs and bringing in return a load of manure. Any one observing the vast quantities of Ox-eye Daisies throughout Philadelphia county, and now spreading and steadily advancing upon us in the lower part of Montgomery county, need not be surprised in a few years to see us thus completely overrun with said Daisy and other Weeds, from such a source and cause.

We would advise farmers to be careful, most careful, in the selection of their grass seeds, particularly Clover and Timothy. The sowing of impure seed we regard as the chief cause of the spreading of noxious Weeds, and we may, with great propriety, examine carefully our parcels of seed from the Patent Office—many of them are impure.

Your Committee are of opinion that, although the common Rag or Bitter Weed is regarded by many with but little prejudice, it must necessarily be very exhausting to the soil. There probably is no Weed so generally abundant. We are of the opinion that, if farmers would be more careful in keeping the headlands of their corn fields and open fields or grounds generally, free from them during the Summer and busy season of harvest, they would effect much toward their diminution...."

Potato Rot—Planting Small Tubers.

To the Editor of the American Agriculturist :

Though I do not profess to be a farmer as my practical experience in this department is confined to three fourths of an acre, yet on this I have made some experiments particularly with the potato. Formerly I followed the common practice of using small potatoes for seed. While this was continued, a large portion of the crop was diseased. I then tried using none but full grown and ripe potatoes. Some of these were cut and two or three eyes planted in a hill, others were put in whole. None of those raised from such seed have been affected with the rot. A few days since while visiting a relative in Westchester Co., N. Y., he informed me that his experience coincided with mine. The reasons he gave were that small potatoes having been checked in their growth, before fully ripening, though they possessed the germ of life, were weak, and sickly, and communicated disease to their progeny. In other articles of produce the best are selected for seed, even at the expense of importing from a distance. If small kernels of corn, wheat, or other grains are unfit for seed I see no reason why the same is not true of potatoes. Will some more experienced agriculturist give the results of their own practice?

Fairfield Co., Ct. Chas. F. Raymond.

Remarks.—It is quite doubtful whether the potato disease results entirely from the cause suggested by our correspondent. As in all diseases, weakly plants are most liable to suffer, the use of partly ripened seed may predispose the progeny to the rot, even if it do not cause it. The produce of inferior kernels of grain is usually inferior, but no special disease prevails in consequence. With the potato there is an actual malady whose causes are not fully known, but every thing which tends to give vigorous growth will aid in resisting it. For this reason we should advocate thorough drainage, high cultivation, and the use of the best tubers for seed, as practiced by Mr. Raymond.—Ed.

Experience in Underdraining.

[We believe thorough underdraining invariably pays well, on comparatively dry upland as well as upon that which is low and swampy, and this, too, let the draining cost what it may, within reasonable limits, of course. We have expended as much as $50 per acre in draining land not considered wet by any means, and we firmly believe it would have paid a good profit on the investment had the draining cost $100 per acre. For illustration, suppose a field in its ordinary condition will yield an average of 40 bushels of corn per acre. Drain this field, and there is hardly a doubt that the average would be raised to 60 bushels, with no increase to the cost of cultivation. All experience has proved that this estimate is not too high. Call this corn worth only 37½ cents per bushel, and the increase of 20 bushels per acre will be $7.50, or 15 per cent on the investment of $50 in draining. But our object now is not so much to discuss the profits of draining, as to introduce the remarks below from a recent contribution by W. J. F., to the Rural New-Yorker, in which he gives the result of his own experience in regard to the art of draining. He states that since 1855 he has put down an agregate of 3½ miles of drains, and feels prepared to "talk like a book" on the subject. We think his estimate of the expense too low, to be a guide in general practice, but he certainly shows that the expense is not so great an obstacle, as is frequently supposed.]

We think a great misapprehension prevails in regard to the cost of making under drains,—it being generally considered more expensive than it really is. We know it has not cost us as much as we expected; and as many others who admit the importance of draining, may be deterred by its supposed expensiveness, we deem it essential to the cause of farm "Progress and Improvement," that this matter should be set right. We have seen estimates of the cost of draining in which the ditches were run through the field at the uniform distance of two rods apart, and the cost, at fifty cents and upwards per rod, was made to amount to $40 or $45 per acre. No wonder that at this rate the expense of draining has been made a stumbling block, and the great bug-bear to frighten farmers from farm improvement. We protest against any such calculations, for it is scarcely possible for even the *most thorough* underdraining to cost *nearly* so much.

In the first place, even on low, wet land, drains do not need to be placed so near as two or even three rods apart. A good drain should drain from two to three rods on each side, according to its depth—(the deeper the drains, of course the further on each side they will dry the land.) We find that drains three feet deep will drain the land from two and one half to three rods on each side, or five or six rods wide, while two feet drains will only drain half that width. But with a retentive clay subsoil, the deep drain is little better than the shallow one, and it is better to make them little more than two feet deep, of course placing them nearer to each other. When the subsoil is moderately porous, drains should never be made less than three feet deep, (of course taking care to secure a good outlet,) and we have made some nearly 4½ feet, filling in two feet of stone, in order to get them out of the way. Taking four rods apart as sufficiently close to secure dryness of low, flat land, we find 40 rods of drains per acre. On much of our rolling land they will not be needed, except between the gentle rises of the ground. On much of this kind of land 20 or 25 rods per acre, or even less, will make the ground dry enough for all practical purposes.

Now, then, as to the cost per rod. Drains are frequently dug by the job, at 12½ cents to 18¾ cents per rod, and even higher, according to depth and the hardness of the ground. As they are generally dug, 18¾ cents is a fair average price. But this is by no means the cheapest way to have ditching done. There are various drain diggers, patented and in operation, but we are not acquainted with their working, having never seen any operate. But where these can not be tried, the common *plow* is a good substitute, and should always be used. By plowing two or three paces from the center of the proposed ditch, turning the furrows out *from* the center, a dead furrow can be made ten to fifteen inches deep. It would be advisable to let the plow in several inches deeper the last two or three furrows, though we have seldom done it. Where it is not sward land, in which case it would of course be impracticable, this process should be repeated, plowing a little *wider* than at first, by which five or ten inches more may be loosoned—making, when the loose dirt is cleaned out, quite a respectable ditch, from eighteen to twenty inches deep. In a dead furrow, thus deepened, a man can dig one half more, to the depth of three feet, than by beginning at the surface.

What we have done on the farm at draining has mostly been at parts of days, seldom a whole day at a time; but we have hired a good deal done, at $1 per day, and find from eight to ten or twelve rods per day a good day's work, varying according to the hardness of the ground. Sometimes we have had fourteen or fifteen rods dug in a day, three feet deep; but it was very easy digging. Taking ten rods as a good day's work, in ground well plowed out, and it will average 10 cents per rod, for three foot ditch—merely for the cost of digging. We say nothing of cost of plowing out the ditch, as it is but a trifle, and much more than re-paid generally by the benefit it affords to the soil.

Next, as to the cost of material. If stone are used, it is difficult estimating the exact cost; in fact, they generally cost nothing, except the labor of procuring and laying them, and this varies so much that each farmer must, of necessity, make his own calculations as to the expense. Two-inch pipe tile can be obtained in Rochester at $10 per thousand, or one cent apiece. These are large enough for the great majority of drains—for all, in fact, except the main drain, into which the others empty. As thirteen will lay a rod, the cost of the ditch, excepting laying and filling in, is only 23 cents per rod. Where the bottom of the drain has been smoothed so as to remove all inequalities, (for which a narrow hoe is convenient,) the laying of the tile is very quickly performed. Care must be taken to prevent the depression of the tile in the soft places, for if a tile sinks below the others it will, in time, fill up so as to leave no room for the water to pass through. A spirit level and a long narrow board, of uniform width, are also very useful where the ground is almost level, in order to see that there is a *uniform* fall. Two inches fall in fourteen feet is plenty—but one inch, or even less, will do, provided it is uniform.

In filling in the ditch, a little straw should be thrown on the tile in order to keep the loose dirt from running in at the joints, before it gets settled. Some prefer coarse gravel for covering the joints of the tile, and where it can be easily obtained it may be well to use it; but straw will do very well. We have used each with good results. Then throw in a little dirt to prevent the tile from being broken or misplaced, and plow in the soil again. It is no matter if some of the yellow dirt from the subsoil remains on the surface. It will soon be as good as any, and we think a little better for wheat.

You have now a ditch completed, (three feet deep,) at a cost, (allowing two cents per rod for laying tile and filling in, which we think is enough) of only 25 cents per rod. We can aver that the cost of our ditches, with two inch tile, has rarely exceeded this, and on easily digged ground has often fallen below it. So the cost of thoroughly draining *wet* land—drains four rods apart, or forty rods per acre—is just $10; and on much of our land where wheat *almost always* winter-kills, the soil can be made dry enough at a width of twenty rods, at a cost of $5 per acre. Those who have thought draining too expensive to pay, will see that it is not impossible for two crops, or even one, by their *increased* value, to more than pay all the cost of draining the land. We are quite certain it frequently does. But draining is a *permanent* investment, and it is not fair to charge one crop with all the expense. The *real annual* cost of this draining, costing $5 or $10 per acre, is 35 to 70 cents per year.

"Thorley's Cattle Food"—Is it worth the Price asked for it?

During a year or more past, our city and neighboring towns, as well as many distant points, have been overrun with flaming handbills, calling attention to an article imported from England, entitled "Thorley's Cattle Food." We have observed that it is even more extensively advertised in England, than here. The mode of advertising, both there and here, is very ingenious and "taking," and the article has attracted not a little attention.

As a matter of public interest, and to be able to answer a great number of inquiries, we have been desirous to ascertain something of the probable value of the article, and we have experiments now in progress. As it is an organic compound, it is somewhat difficult to make an accurate analysis that shall give exactly the materials used in its composition. Like many of the so-called "patent pills," it is not patented for this would require a public record of its actual composition.

Having learned from several reliable parties who have tried it, that horses and neat cattle fed with it, seemed to exhibit more plumpness of form, and sleekness of coat, our first impression was, that it contained arsenic, or antimony, both of which articles, when fed in small quantities, at first favorably affect the *appearance* of animals. But we will do the manufacturers the justice to say, that we procured samples from headquarters, and without their knowledge had these submitted to thorough qualitative analysis, by the first chemists of the country, without discovering a trace of either arsenic or antimony. We are glad to find this to be the case, for however great or little value the article may have, it is a relief to know, that it is not positively poisonous.

But will it pay to buy this article to be used as a frequent and constant food for cattle? So far as we have examined it under the microscope, and by chemical tests, it appears to be a mixture of nutritious articles of food—perhaps beans, barly, flax seed, etc.—with which is combined a small quantity of coloring matter, and some tonic medicine. The "tonic" may sometimes, even frequently, render it useful to animals, just as "Peruvian Bark," quinine, and other tonics are useful to men. But no one would recommend every man, sick or well, to use tonic medicines daily and constantly.

That this food is nutritious, even highly so, we will not assert or deny; but allowing it to be nutritive to the highest degree, we should want much greater evidence than has yet been furnished by experience, observation, or analogy, to warrant us in paying 12 to 14 cents a pound (the price of beef steaks) for an article of diet for animals.

In the English Agricultural Gazette for March 14, page 272, we notice a communication, signed by "Old Bird," (one not to be caught with chaff,) which we suppose refers to the article under consideration. The writer says he has been favored with a circular of ———'s new cattle food, and the analysis by Dr. Letheby; and he proceeds: "I find the mixture consists chiefly of cereals (grains) and Leguminosæ (peas, beans, etc.), and contains about 80 per cent nutritive matter, viz.:

Nitrogenous matter	12.1 per cent.
Carboniferous matter	68.1 per cent.

"From this data it is not difficult to ascertain its actual value. Mr. Spooner states the value of nitrogenous matter to be £20 (about $100) per tun of 2240 lbs., (or nearly 4½ cents per lb.); and of carboniferous matter at £12 ($60) per tun, (or nearly 2⅔ c. per lb.)" With these figures before him, "Old Bird" puts down the value of this "new cattle food" at about $53 per tun, or less than 2½ cents per lb., while it is there sold at £36 ($180) per tun, or 8 cents per lb.

The writer then gives the estimated value of linseed cake, (the common oil cake, left in expressing oil from flax seed) which by the analysis of Johnson, contains say 764 lbs. of nitrogenous matter, and 875 lbs. of carboniferous matter in a tun (of 2240 lbs.), making the cake worth a little over $57 per tun, or about the market price for it in London. According to Dr. Vœlcker, chemist to the Royal Agricultural Society, a mixture of *equal* parts of barley, beans, and oil cake, contains in a tun 509 lbs. of nitrogenous matter, and 1162 lbs. of carboniferous matter; and this mixture (of barley, beans, and oil cake) is, therefore, worth nearly $54 per tun, or a trifle more than the same weight of the "new cattle food." "Old Bird" thus sums up: "It is evident, therefore, either linseed cake at its present value (£11 per tun), or a mixture of equal parts of barley, beans, and linseed cake, at the *present price* contains more nutritive matter, than a tun of the cattle food. If you add to *your own* mixture the cost of grinding, etc., still you may be satisfied that your own combination of substances (containing a far larger portion of nitrogenous matter,) stands you at barely one-third the cost of the new cattle food. Practical men of business consider these things, and are not caught and made to pay the forfeit of the inexperienced."

In a more recent number of the Agricultural Gazette, we find an editorial referring to the above, which we will republish entire, as it embodies about what we should say on the same subject.

"We have received a letter from a London firm, makers of a new cattle food, who believe that they are referred to by 'An Old Bird' in a paragraph published on page 272. They allege that our correspondent is mistaken in imagining from Dr. Letheby's analysis that he has ascertained the cost of the article which they manufacture. On the contrary, they could tell him something about a large percentage of waste, about a costly commission agency, about expenses of London premises, labor, carriage, printing, and advertising, of which he seems to know nothing. 'Besides, as a physician claims his guinea for writing a prescription, so we fancy our invention, which has cost us some labor and expense, is entitled to a profit.'

"Now, if an 'Old Bird' is to be misled by such reasoning as this, he has no claim whatever to the signature which he has adopted. What is it to him or to any one who may wish to try this cattle food, whether the process of its manufacture be costly or not; the only point for his consideration is, *whether or not the article offered be worth the price asked for it.*. To that end let him try it if he chooses. But as this involves considerable expense, it is perhaps reasonable in the first place, to ask the chemist what the food contains. Dr. Letheby is accordingly consulted, and he says, so our correspondent alleges, that 12.1 per cent of the food is 'nitrogenous matter,' and 68.1 per cent of it is 'carbonaceous matter.' Now, Mr. Spooner says that the nitrogenous matter of any nutriment may be had in most foods for £20 a tun, and that the carbonaceous matter of any nutriment may be similarly had for £12 a tun.

"If these data be correct what can be easier than to ascertain the value as a nutriment of the new cattle food in question? This accordingly has been done, and our correspondent, finding that the article comes out of this arithmetical examination worth £10 11*s*. 9*d*. a tun, whereas the manufacturers ask £35 a tun for it, declares he is not to be caught, and very properly signs himself 'An Old Bird.' The manufacturers may be losers or they may be gainers, that is nothing to him. If they can offer in their food these two classes of nutriment at a smaller price than he pays for them in beans or linseed-cake, he will gladly be a customer, but seeing that they offer them at more than three times the price for which he can procure them elsewhere, he is wise enough to decline the offer, and good enough to point out the snare to others.

"Let any manufacturer of a new cattle food buy beans and linseed, lentils, cake, etc., and mix a little salt and grind them up so as to be immediately available for use in the feeding house, and farmers will pay him handsomely for his labor. The division of labor principle is economical, and therefore profitable for all; and there can be no reason why the grinding of food for cattle should not be a business as much as the grinding of food for man. But if any one, as we believe that many do, justifying themselves by the expenses of London management and by the cost of some mysterious condiment which they use in their manufacture, shall offer his manufactured food at three or four times the cost of the only nourishing ingredients it contains, certainly we shall not help him to a customer."

With our present light on the subject, we are forced to agree with our London cotemporary. We believe, our farmers can not afford to pay the profit required by the manufacture and importation of an article from London, together with extensive advertising, etc., for nutriment, which they can obtain at a fourth of the cost in other forms. Beans, barley, and oil cake, are cheaper here than in England, and to buy and mix them in England to be brought here, is "bringing coal to Newcastle." Give horses and cattle a due supply of nutritious food, barley, beans, and oil cake, if you like, but mix and grind them yourselves, instead of purchasing them at three, four, and five times their value, because mixed by others. If animals are diseased or weak, give them tonics when needed, but do not force them to eat medicines daily in the form of "cattle food."

Agricultural Inventions for a Single Year (1859).

We were never more forcibly impressed with the rapid improvement now taking place in all that pertains to the cultivation of the soil than when this morning we took up an advance copy of the Patent Office Report for 1859, (kindly furnished by H. McCormick Esq., ch. Agr. clerk) and turned to the list of patents granted during one year in the single department of Agriculture. An hour or two spent in classifying and counting the various inventions and discoveries, gave us the following results, viz:

There were patented during 1859:

Agricultural Implements of all kinds	659
Seed Planters; 30 designated as corn planters; 34 as seed planters; 42 as seeding machines; 10 as cotton seed drills; and 1 potato planter	117
Harvesters, including 9 for cutting corn and sugar cane, 3 for harvesting cotton, 2 for digging potatoes, and 1 for gathering beans.	113
Cultivators	58
Plows, including 5 Steam Plows	43
Churns	42
Grain Separators	26
Horse Rakes	24
Straw Cutters	21
Harrows, including 13 Rotary Harrows	20
Bee Hives	14
Sugar cane mills	13
Improvements in sugar manufacture	13
Mills for grinding Corn	9
Cotton Gins	9
Potato Diggers	8
Threshing Machines	7
Corn Huskers	6
Cotton Seed Hullers	6
Machines for sowing fertilizers	6
Machines for cutting and binding grain	6
Vegetable Slicers	6
Fertilizers	5
Cotton Seed Cleaners	4
Hop Frames	4
Hay Making Machines	4
Mowing Machines	4
Cheese Vats	3
Ox Yokes	3
Spading machines, including 1 Steam spader.	3

Two of each of the following: Butter working, Clover (seed?) hulling, Grain fans, Grain weighers, Weeding Hoes, Machines for milking, Cider Mills.

One each of machines for making "Pearl barley," Cleaning animals, Corn cribs, Machine for Making Drain Tiles, Flail caps, grain bin, grain cradle, grain dryer, grain shovel, grain hulling, hay manger, plant protector, field roller, scythe snath, machine for smoothing walks, pitch-fork, pea-vine trellis, and machine for girdling and felling trees.

Here are 659 inventions designed to facilitate the work of the cultivator of the soil all brought out in one year. Other years are similarly productive. It is true that many of these inventions do not turn out to be of special value either to the public or the inventors themselves; but there is originality enough in each of them to warrant careful government examiners in giving a patent. And it is not to be doubted that a considerable proportion of these new implements, and additions to old ones, are real improvements which will facilitate human labor, and lessen toil.

The Cattle Disease—Treatment.

Almost the entire country is excited by the reports of the cattle disease prevailing in some parts of Massachusetts. Indeed, it just now seems as if the disease had suddenly sprung up in all parts of the country. In the present excitement it is impossible to arrive at any definite opinion as to the nature and extent of the disease. During a dozen years past, we have from time to time heard of single animals, here and there, which, from the descriptions received, seemed to be affected similarly to those now diseased in Massachusetts. We are almost daily receiving reports from New-Hampshire, New-York, New-Jersey, Pennsylvania, Ohio, etc., of local diseases among cattle, which are apparently of a similar character. Whether the disease be the same, or one of the same general type, or whether fear and imagination have aided in making out an analogy, it is not possible yet to decide. We present here a *diagnosis*, or description of the symptoms of the disease, as it exists in Massachusetts, adopting the language of the report to the Legislature by Messrs. E. F. Thayer, Veterinary Surgeon, and George Bates, M. D.

DIAGNOSIS OF PLEURO-PNEUMONIA.

"If the animals are at pasture at the commencement of the disease, they will be found, early in the morning, separated from the herd, with arched backs, hair rough, and refusing to eat; while, as the day advances, they will join the rest, and appear to be in usual health.

A slight but husky cough will be occasionally recognized; and, at times, the breathing will be increased, as if the animal had made some extra exertion; and in milch cows there will also be a diminished amount of milk.

As the disease progresses, the cough becomes more frequent and husky; the respiration is humid; the pulse increased and somewhat oppressed; the appetite diminished; rumination suspended; bowels constipated; surface of the body and limbs cold; the skin rigid and almost immovable over the ribs; the animal, upon pressure upon the spine, flinches, and is unable to bear pressure or percussion on the sides of the chest or costal regions (or ribs).

In more advanced stages the respiration is difficult, labored, and painful. The animal frequently lies down; and when standing, the head is protruded, the mouth covered with frothy saliva, the muzzle cold, and the aspect spiritless and haggard.

On percussing (striking) the affected side, a dull or dead sound is usually elicited to a greater or less extent, but this will depend upon the extent to which the lung has become consolidated, and the presence or absence of fluid in the cavity of the chest. On applying the ear to the sides of the chest, one or the other is found to be affected; sometimes, though rarely, both are implicated. When applied in the region of the diseased part, the ear fails to perceive the low, rustling murmur of healthy lungs, and detects a crepitating sound or rattle, which, as the case advances towards an unfavorable termination, becomes duller, and, at last, is altogether inaudible.

An examination of animals which have died of Pleuro-Pneumonia, will present various appearances. The lungs of the same animal will show all the different stages of the disease;—red hepatization, dark spots, and an effusion of serum...."

The above description of the disease, as found in Massachusetts, which corresponds with the symptoms given by English authors, will enable most persons to decide, whether any animal is affected with the same or a similar disease. The following letter, from a well-known gentleman, who has had much to do with cattle, will be found interesting and instructive to those who may have diseased cattle. The treatment recommended is a good one in any case, for a disease of the lungs, and if it does no good, it can do no harm. The immediate separation of a suspected animal from all contact with other animals, should not be overlooked.

Fordham, Westchester Co., N. Y., June 14, 1860.

To the Editor of the American Agriculturist:

At your request, I give briefly my experience with the *Pleuro-Pneumonia* or "cattle disease." During many years past I have from time to time had animals affected with a disease very similar in every respect to that now attracting so much attention in Massachusetts and elsewhere. I think the disease has been more or less prevalent in various parts of the country for at least fifteen years past—its virulence depending upon local causes, weather, etc.—and now that public attention is attracted to the subject, we shall doubtless hear of it from all sections, probably in every one of the older States. Formerly it was confined somewhat to dairy herds, and it being to the interest of the milkmen to keep the matter quiet, little was said upon the subject in the public prints. You have doubtless received many individual letters, describing single animals affected, and asking prescriptions. [We have. Ed.] The disease appears to be among cattle, what consumption is among men—similar in character and effects, but less general, and more easily overcome.

In former years the animals in my own herd, and in the herds of my neighbors, rarely recovered after the disease became seated upon them. Our treatment then was bleeding and physicing. But during the past Winter, a few cases of the disease appearing, we adopted a different mode of treatment, and though the animals were as badly attacked as in former years, we have succeeded in restoring every one to perfect health.

Our treatment is this: As soon as an animal appears diseased, we separate it from other animals, and place it where it will have plenty of air, but be sheltered from cold storms and from hot sun—in short, give plenty of pure air, and a cool but uniform temperature.

No medicine is given *internally*, except first-rate diet in small quantity. Ground oats, with a trifle of good hay or pasture, we have found best. The animal will seldom eat but a small quantity of oat meal, and this being nourishing, and not hard of digestion, gives "good heart," and consequently more ability to resist and throw off disease.

Externally we get up a counter-irritation over the region of the lungs. To do this, we apply the common "blister salve," or Spanish flies. It is made as strong as possible by the usual methods of the druggists. The hair is shaved off for about the size of the whole hand on both sides of the animal, just back of the fore-legs—not too high up the sides. The blister salve is then strongly rubbed into the skin upon the shaven spot. The sores are allowed to run for a day or two, and then dressed with sweet oil or lard. With us, one blistering has answered in every case, but should an animal be very bad, I would recommend a second blistering, if necessary, after the first has commenced to heal.

In regard to the disease being contagious, my opinion is that where animals come directly in contact, as when they stand side by side in stalls, or come together in yards or pastures, the fetid breath from one animal may be inhaled by another, and become the seed of disease, if the health and vigor of the animal be not sufficient to resist and throw off its effects.

Chas. W. Bathgate

Artesian Well at Columbus.

In April last we published an inquiry concerning the Artesian Well at Columbus, Ohio, which had been reported as 2,300 feet deep, and the deepest in the world. Several subscribers have responded. We are indebted to R. Hume Esq., Secretary of the State House Commissioners, in Columbus, for a copy of their official report containing a complete account of the work and many other details, from which we extract several items of interest.

The work was commenced in July 1857, being undertaken to procure a permanent supply of water for the new State House in the process of erection at Columbus. From observations made on similar works in various parts of the world, and judging from the supposed character of the strata of rock underlying that section of the country, scientific men were of opinion that a permanent supply of water could be obtained at from 100 to 600 feet in depth, and at an expense of from $2000 to $6000. In the first experiment the boring reached 110 feet, but was abandoned, quicksand entering the shaft in such quantities that it could not be excluded by tubing. A second shaft was sunk 122 feet, but it was also abandoned from the same cause. Nov. 4th 1857, a third trial was commenced, and continued successfully until Oct. 15th 1859, at which time a depth of 2340 feet was reached. The work was then suspended, the appropriation therefor having been exhausted. Application was made to the last Legislature for additional funds, and in view of the important scientific facts brought to light during the progress of the work, as well as, if possible, to secure the end originally aimed at, $3000 additional were granted. The work was resumed on May 7th, and on the 28th, the date of Mr. Hume's letter, they were boring at the depth of 2388 feet, and progressing downward at the rate of four feet per day. At a depth of 149 feet, a vein of water was struck which washed away the borings for nearly a hundred feet below, and rose within 22 feet of the surface. It is thought an abundant supply of water may be had by pumping from this vein. At 180 feet sulphur water was obtained. At 675 feet the water became quite salty, and has continued so down to the deepest point reached. Thus it is probable that even if water finally comes to the surface, it will be unfit for ordinary use. But the important information gained concerning the deep seated strata of rocks, it is thought, justifies a continuance of the work.

Some of the deepest Artesian wells are as follows:

At Grenelle, Paris, France, 1794 ft. The water from this well rises 40 to 50 ft. above the surface, and discharges six hundred gallons per minute.

A well in the Duchy of Luxemburg, is 2336 ft. deep, one at Charleston, S. C., 1145 ft., at St. Louis, Mo., 2199 ft., at Louisville, Ky., 2086 ft.

Who Invented the Mowing Machine?

Not the machine as now improved, and sweeping down a whole harvest in a day, but the instrument as first devised and patented. If a writer in one of our cotemporaries speaks correctly, the honor belongs to a Mr. Enoch Ambler, of the town of Root, Montgomery Co., N. Y. A patent was issued to him, Dec. 23d, 1834, for "a machine for cutting hay or grain." We can not now go into the particulars of his invention, but those who have examined the descriptions of the original patent, affirm that it contains the essential features of all the machines since made.

The modifications and additions since attached by other patentees are certainly of great value, but if there is any special honor due to one who strikes out an original idea of great practical value to the public, it surely belongs in this case to Mr. Ambler. We understand that he is a plain wagon-maker, in moderate circumstances, having never received much profit from his invention; that his own patent expired long ago by limitation, and that he derives no benefit from the sale of the many machines based on his invention. Let him at least have the honor justly due. *

Improved Horse Power Pitchfork.

Every man who has pitched a load of hay over the "big beam" on a hot Summer day will, we think, study the accompanying illustrations with pleasure. No more tugging to loosen the forkfull from the load, no more lifting and straining to raise it so as to clear the beam, but simply to ride a horse back and forth, and guide the direction of the great masses of hay which are so easily deposited in their place. The wonder is, that so desirable an arrangement has not long since come into general use; inventions of the kind having been made several years ago. In some sections they are already adopted. A Pennsylvania farmer said to us last year, "a man is considered behind the times in our section who unloads hay with the hand pitchfork."

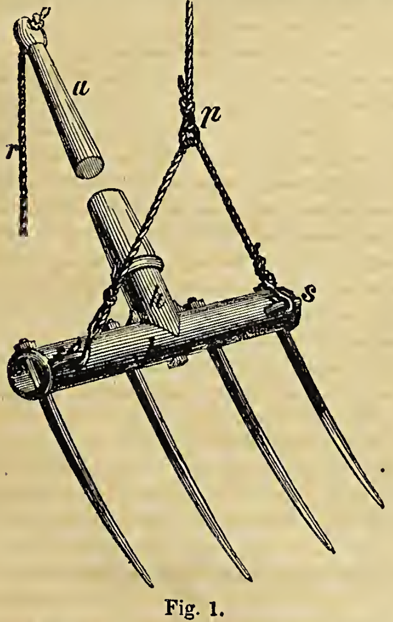


Fig. 1.

The implement here shown, manufactured by Herald & Tompkins, Tompkins Co., N. Y., is the simplest we have seen. Fig. 1 shows the construction of the fork. It is made with four, heavy, steel tines, the two middle ones sixteen inches, and the outer ones fifteen inches long. These pass through a hollow cast iron head, *h*, *h*, and are fastened by nuts screwed upon their upper ends. They are made of unequal lengths, to enable the operator to work the fork into the hay more easily. Two staples, *s*, *s*, cast solid with the head, receive the hooks by which the fork is attached to the hoisting rope. The handle *a*, merely a stout straight stick, is inserted in a hollow projection of the head, *h*, *h*. It is five feet long, only part of it being shown, to save space. A light rope is attached to its upper end, by which the operator holds the fork in a position to retain the hay while being elevated.

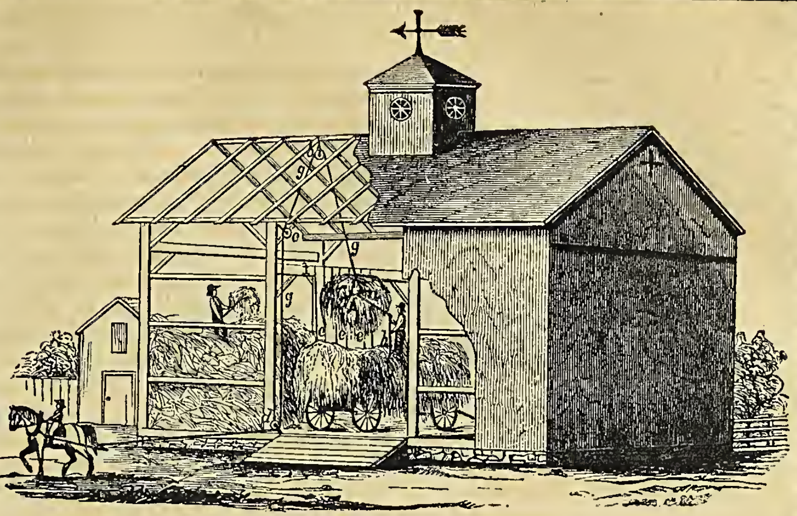


Fig. 2.

The manner of working is shown at Fig. 2. The rope *g* attached to the loaded fork, passes through three pullies, viz: *b*, hung from the second or third rafter from the large beam; *c*, attached to the plate; *d*, fastened to the foot of the post at the side of the doorway. Boards, *e*, *e*, *e*, *e*, to the width of eight feet, standing on the floor and inclined against the large beam, *f*, allow the hay to slide up easily by the side of the mow, and over the beam. The workman on the load, enters the fork, and depresses the end of the handle, and keeps it in this position by the hand-rope, *h*, until the horse has drawn it up over the mow; then by slacking the hand-rope, the hay drops by its own weight, and the horse is backed to lower the fork for another portion. A load can thus be easily taken off in much less time than by hand pitching. The price for fork, pullies, ropes, etc., complete, we believe is twelve dollars.

There are several modifications of these horse-pitchforks. We saw a very good one on exhibition at the N. Y. State Fair, last Autumn, which is made in Pennsylvania, in Bradford county, we believe, but we do not recall the manufacturer's name. This has a hinge between the fork and handle, which can be thrown out of gear with a hand rope when the hay is elevated, making it very convenient for use, especially in a small space. The one here shown is very good for ordinary purposes. Any one of these horse-pitchforks will be found a great labor-saving, time-saving, and expense-saving implement.

Overdoing.

Some men—young men especially—are proud of great feats of strength and endurance. They are not satisfied with ordinary labor faithfully performed; they must be doing some wonderful thing to excite attention and secure praise. Such men may be good enough in their way, but are not generally the most useful in society. For all ordinary purposes, they are apt to be lazy, and vain, and unstable.

In the playfulness of youth, or the vigor of early manhood, it is natural for one to love to try his strength or his agility, just for the fun of it. Ordinarily, no harm comes from such performances; yet we must be allowed to say, be careful in your gymnastics. Not a few young farmers and mechanics have, by the excesses of a single day, laid the foundations of disease or infirmity for a whole life. In the present season of haying and harvesting, a word of caution here may be timely. Young men, don't be ambitious to do a great day's work. At all seasons of the year, more will be accomplished by doing regularly a fixed and moderate amount of work, than by overtaxing yourself at any one period. The work will be better done, and you will be likely to live longer to enjoy its fruits.

Shall I Buy a Mower?

To the Editor of the American Agriculturist:

Would it be true economy for a farmer that cuts but twenty or thirty tuns of hay to make an investment in a mowing machine. The view I take is, a machine would save the labor of hand mowing. Good mowers being scarce and their wages high, I could hire a cheaper set of hands to take care of the grass if it was cut with the mower. A farmer hires a gang of hands for the haying season, who can cut as much grass in the morning while the dew is on, as they can take care of during the day, and this is all that could be done with the mower, for it would not do to get down more than can be attended to.

If the grass is cut with a machine, the hands would be idle for three or four hours in the morning. Those who hire out for haying will do no other work, and if they would, there would not be much to do, as all farmers calculate to "hoe out" and do their work all up before haying. If a mower were used there would be three or four hours in the morning besides every cloudy day lost on every man. I do not think there is so much in getting down the grass as there is in taking care of it after it is down.

Farmers that depend upon their farming for a livelihood must be economical. If a mower will pay the interest upon the amount of money invested of course it is the interest of every farmer to have one. Mr. Editor I would like to see a statement of your views in the *American Agriculturist* in regard to mowing machines versus the scythe. A YOUNG FARMER.

REMARKS.—By the use of the mower, the farmer having not more than thirty tuns of hay to cut can secure his crop without employing extra hands, that is, with the help ordinarily employed on a place where that amount is gathered. The time saved in mowing can be employed in securing that previously cut. No spreading is required after the mower, which also saves time, and the hay makes more rapidly than if left part of the day in the swath after the scythe. There will always be employment enough to keep the hired man at work during the two or three hours that the farmer is taking his morning ride on the mower, with which he cuts easily what he and his man would have otherwise bent their backs over until night. Then, the previous day's curing can be carted in, and with the horse rake, which should always follow the mower, the morning's cutting can be put in good shape before night. But who has ever seen a farm, devoted in part to hoed crops, where there was not *always* weeds enough to occupy all odd spells?

On Cross Breeding.

[Not only the owners and breeders of domestic animals, but the general reader as well, will be interested in the following extracts, which we take from a lengthy prize article in the last semi-annual volume of the Journal of the Royal Agricultural Society of England. The essay, written by W. C. Spooner, M. R. C. V. S., covers a space equivalent to a dozen pages of the *Agriculturist*, and contains many valuable illustrations from English practice. We have endeavored to extract those portions embracing the pith of the whole.—Ed.]

It can not be denied that the natural laws by which the preservation of animal species is effected, are involved in considerable mystery, and though the subject is well worthy the attention and study of the practical man as well as of the physiologist, experience is yet fraught with so much contrariety that attempts to lay down any certain guide on it, have, for the most part, been received with considerable distrust. No sooner does the inquirer imagine that he has discovered some particular principle which obtains universally, than he is met by circumstances which apparently upset his previous conclusions. The maxim "*like begets like*," for example, is a rule having very extensive sway, yet, as propagation is the work of two parents, the respective influence of the one or the other is a matter involving considerable diversity of opinion, and prevents anything like a certain conclusion being arrived at. We can not do better than consider, on the very threshold of our subject, the respective influence of either parent; for on this the merits of pure or cross breeding must principally depend.

The most probable supposition is, that propagation is done by halves, each parent giving to the offspring the shape of one half of the body. Thus: the back, loins, hind quarters, general shape, skin, and size, follow one parent; and the fore-quarters, head, vital and nervous system, the other: and we may go so far as to add, that the former in the great majority of cases go with the male parent, and the latter with the female. A corroboration of this fact is found in the common system of putting an ordinary mare to a thorough-bred horse; not only does the head of the offspring resemble the dam, but the fore-legs likewise, and thus it is fortunately the case that the too frequently faulty and tottering legs of the sire are not reproduced in the foal, whilst the full thighs and hind quarters, which belong to the blood-horse, are generally given to the offspring. There is, however, a minority of cases in which the opposite result obtains. That *size* is governed more by the male parent, there is no great difficulty in showing;—familiar examples may be found in the offspring of the pony-mare and the full-sized horse, which considerably exceed the dam in size. Again, in the first cross between the small indigenous ewe and the large ram of another improved breed, the offspring is found to approach in size and shape very much to the ram. The mule offspring of the mare also very much resembles both in size and appearance its donkey sire.

These are familiar examples of the preponderating influence of the male parent, so far as the external form is considered. To show, however, that size and hight do not invariably follow the male, we need go no further for illustration than the human subject. How often do we find that in the by no means infrequent case of the union of a tall man with a short woman, the result in some instances is that all the children are tall, and in others all short, or sometimes that some of the family are short and others tall. Within our own knowledge, in one case, where the father was tall and the mother short, the children, six in number, are all tall. In another instance, the father being short and the mother tall, the children, seven in number, are all of lofty stature. In a third instance, the mother being tall and the father short, the greater portion of the family are short. Such facts as these are sufficient to prove that hight or growth does not exclusively follow either the one parent or the other. Although this is the case, it is also a striking fact that *the union of tall and short parents rarely, if ever, produces offspring of a medium size*—midway, as it were, between the two parents. Thus, in the breeding of animals, if the object be to modify certain defects, by using a male or female in which such defects may not exist, we can not produce this desired alteration; or rather, it can not be equally produced in all the offspring, but can only be attained by weeding out those in whom the objectionable points are repeated. We are, however, of opinion that, in the majority of instances, the hight in the human subject, and the size and *contour* in animals, is influenced *much more by the male* than the female parent; and, on the other hand, that the constitution, the chest, and vital organs, and the forehead generally, more frequently follow the female.

We have dwelt on this point the more, because on it hinges the difficulty of effecting certain improvements in breeding by means of crossing, and the still greater difficulty of establishing a new breed by such means. So great is this difficulty, that many breeders, finding their attempts at such improvements so frequently baffled, or observing this to be the case in the practice of others, cling with superstitious tenacity to the doctrine of *purity of blood*, believing it to be the *Ark* in which alone true safety is to be found.

Now, *pure breeding*, which, when carried to an excess, is called in-and-in breeding, has its advantages as well as its disadvantages. Its friends observe with great force, that when we have in breeding reached great excellence, it is folly to risk the loss of such excellence by means of crossing; and the more so, as the defects of a parent may disappear in a first or second, and reappear in the third or fourth generation; "*breeding back*," as it is commonly termed. A friend of the writer's, Mr. John Clark, of Lockerly, a strenuous advocate of pure breeding, observes that a correspondent in Suffolk informs him, that he had seen the cross tried between the old Norfolk and Down sheep, and the first cross was admirable, but they soon became disproportioned and unsightly; also the Down and Leicester in some midland counties figured for a time, and then for the same reasons were given up, and such he thinks *will be the fate of the New Oxfords*, or the mixture of the Cotswold and the Down. He adds, that for the last four years he has used rams from the cross with Down ewes, and the offspring have answered his purpose for *fatting* lambs, but one lamb in ten presents unmistakable evidence of its mongrel origin.

Again, it is urged, that great excellences can only be perpetuated by union with similar excellences, and beyond all this that there is a certain amount of advantage from an unstained lineage—from the very possession of breed, as it is designated. The objectors to *in-and-in* breeding urge, that by so doing we engender weakness of constitution, diminution of size, hereditary diseases, and also a tendency to barrenness; but it is argued in reply to such objections, that they occur from want of sufficient care in weeding out defective animals, whether as respects constitution or size. It is a well-established fact, that in the human subject too close affinity, such as the intermarriage of cousins, tends to mental diseases and consumption; and we can readily imagine that *when there is a tendency to such diseases in a family*, this tendency must be greatly increased by intermarrying with a member of the same family. Animals not being subject to mental diseases, the observation does not apply to them with the same force, but it is true in a lesser degree. At the same time, unless the choice is extremely confined, most of the evils of pure breeding can be avoided by careful selection and rigorous weeding. Examples of pure breeding are familiar to us in the celebrated race-horse, the first-class short-horn, and the Southdown sheep; but, so far as purity of blood alone is considered, the mountain sheep of Wales, the Highland Scotch cattle, and the Shetland or Welch, are equally pure; but whilst the latter have been propagated without care or attention, the former have, by careful selection and rigorous weeding, been considerably enhanced in value. A striking example of long continued pure breeding is afforded by the Leicester flock of Mr. Valentine Barford, of Foscote near Towcester, who has the pedigree of his sheep from the day of Bakewell in 1783 to the present time, and since 1810 he has bred entirely from his own flock, sire and dam, without an interchange of male or female from any other flock. He observes, "that his flock being bred from the nearest affinities—commonly called in-and-in breeding—has not experienced any of the ill effects ascribed to the practice. His flock is remarkably healthy, and his rams successful, but his sheep are small.

Let us pause for a few minutes to consider what constitutes *breed*, or rather what is meant by high breeding. We shall find that it refers to very different desiderata in different breeds. In the thorough-bred horse it signifies a very high development of the muscular and nervous systems, accompanied by such mechanical structure as when united with it constitutes the highest manifestation of speed and endurance. In the ox, however, it implies very different qualities, viz., early and rapid growth—the development of flesh or muscle on the parts most prized for food—a disposition to lay on fat; these, with the possession of smallest amount of bone consistent with strength and health, are the principal characteristics of a well-bred animal. Instead of the highly nervous temperament of the race-horse, we have here a quiet, lazy disposition; in fact, a lymphatic temperament, by the influence of which the digestive organs reign supreme, and convert for the public benefit a given quantity of food into the utmost amount of flesh and fat. The same observations apply with equal force to the sheep, and in a still stronger degree to the pig. A well-bred pig is the incarnation of everything indolent and lethargic, and the very antipodes of that high organization and nervous development which belong to a high-bred horse. Examples of pure breeding are probably to be found in greater perfection in cattle, than in sheep. The *Devon* and *Hereford* cattle have descended through many generations in unbroken lines, and owe the perfection which they have attained to careful selection. The *Short-horns*, although considerably more modern in their origin, and moulded into their present form by a series of successful crosses, have yet been preserved pure with even more rigorous care than the other breeds which we have mentioned. The solid frame and great feeding properties of the Herefords—the quality of beef and richness of cream, as well as the working properties of the Devons, are well known and generally appreciated ; and yet these qualities are insufficient to resist successfully the encroachments of the short-horns, whose early maturity and disposition to lay on both flesh and fat, joined with fair milking properties, are such that they outnumber both the other breeds combined. As, however, the leading purpose for which a breed of cattle is kept, is generally well defined, whether for the purpose of the dairy or for that and early fatting, or simply for beef or for working as well, and, as each of these purposes can be well attained by keeping a pure bred, there is not the same temptation or inducement to cross, which is often experienced in sheep farming, in order to insure specific advantages, which can not otherwise be attained.

This being the case, we may most advantageously devote our remaining space to the practice of crossing, as illustrated in sheep breeding. We may start, then, with this principle, that to cross for crossing sake is decidedly *wrong* ; that, unless some specific purpose is sought for by crossing, it is far better to cultivate a pure breed. The country is, indeed, under great obligations to those gentlemen, who carefully preserve their breed intact, and endeavor to improve it by weeding and selection. We can readily excuse their prejudices, if they have any, and have no wish to interfere with their creed. Let theirs be the office to preserve our fountains pure and undefiled, and to supply others with the best sources of improvement by crossing. And we do not confine our praise to those merely who, keeping in the high road of fashion, have succeeded in securing, both by prizes and prices, a full and sufficient reward for their labors, but would award it to those also who,keeping perhaps in the second rank, have yet supplied their neighbors and the public with valuable pure-bred sheep at moderate prices....

....It has been truly said that the public is wise, though composed of fools ; and undoubtedly, when the pocket is concerned, the decision of the public is, for the most part, correct. Thus at the various autumnal fairs large lambs are in the greatest request, and command the highest prices, which in itself is a sufficient proof that with a given amount of food they make a greater quantity of mutton. It was found indeed by Mr. Lawes, in his careful and valuable experiments, that the Hampshire sheep, although they were surpassed by the Cotswold, yet exceeded the Southdown in the amount of mutton raised from a given weight of food.

The greater economy of fatting a young over an old animal may be readily explained by the fact, that whilst the latter increases in fat alone, the former does so both in flesh, fat, and bone, and thus the latter can assimilate a greater amount of the nutritious properties of the food, and is consequently a more profitable feeder....

....Some thirty years since a Hampshire farmer still living (Mr John Twynam) used the improved Cotswold ram with his Hampshire ewes, and the first cross exhibited a remarkable proof of the preponderating effect of the male. The produce, in size, general appearance, and wool, partook far more of the ram than of the ewe, and it was thought that a most valuable breed had been obtained, which, with the increased size, and weight of fleece, and disposition to fatten of the Cotswold, would combine the hardiness and folding capabilities of the Hampshire. It was found, however, no easy task to perpetuate such a breed after the first cross—the defects of the one parent or the other would appear and reappear in the second and third generation, and it was only by careful weeding that anything like uniformity could be attained....

....To return, however, to our proper subject, we may observe that various attempts were made some years since to introduce the merino blood, with the idea that great benefit would be derived from the increased quantity and the superior fineness of the wool ; and undoubtedly, if the carcase of the Southdown and the wool of the merino could be united in the same animal, the acmé of sheep breeding would be attained. It was found, however, that the quality of the wool was not a sufficient recompense for the want of early maturity and feeding properties ; and at length, after many trials, the merinos disappeared by the continued use of other rams. It is very possible, however, that they may have left behind them some improvement of the fleece, for it is equally difficult in breeding to get rid of a virtue and to wash out a stain....

....We can not do better, in concluding our paper, than gather up and arrange in a collected form the various points of our subject, which appear to be of sufficient importance to be again presented to the attention of our readers. We think, therefore, we are justified in coming to the conclusions :

1st. That there is a direct pecuniary advantage in judicious cross breeding ; that increased size, a disposition to fatten, and early maturity, are thereby induced.

2nd. That whilst this may be caused for the most part by the very fact of crossing, yet it is principally due to the superior influence of the male over the size and external appearance of the offspring ; so that it is desirable, for the purposes of the butcher, that the male should be of a larger frame than the female, and should excel in those peculiarities we are desirous of reproducing. Let it be here, however, repeated as an exceptional truth, that though as a rule the male parent influences mostly the size and external form, and the female parent the constitution, general health, and vital powers, yet that the opposite result sometimes takes place.

3rd. Certain peculiarities may be imparted to a breed by a single cross. Thus, the ponies of the New Forest exhibit characteristics of blood, although it is many years since that a thorough-bred horse was turned into the forest for the purpose. So, likewise, we observe in the Hampshire sheep the Roman nose and large heads which formed so strong a feature in their maternal ancestors, although successive crosses of the Southdown were employed to change the character of the breed.

It has been asserted by some observers, that when a female breeds successively from several different males, the offspring often bear a strong resemblance to the first male, which is supposed to arise from certain impressions made on the imagination or nervous system of the female. Although this is sometimes or often the case, we doubt very much whether it is so frequent as to be considered as a rule.

4th. Although in the crossing of sheep for the purpose of the butcher, it is generally advisable to use males of a larger breed, provided they possess a disposition to fatten, yet, in such cases, it is of importance that the *pelvis* of the female should be wide and capacious, so that no injury should arise in lambing, in consequence of the increased size of the heads of the lambs. The shape of the ram's head should be studied for the same reason. In crossing, however, for the purpose of establishing a new breed, the size of the male must give way to other more important considerations ; although it will still be desirable to use a large female of the breed which we seek to improve. Thus the Southdowns have vastly improved the larger Hampshires, and the Leicester the huge Lincolns and the Cotswolds.

5th. Although the benefits are most evident in the first cross, after which, from pairing the cross-bred animals, the defects of one breed or the other, or the incongruities of both, are perpetually breaking out, yet, unless the characteristics and conformation of the two breeds are altogether averse to each other, nature opposes no barrier to their successful admixture ; so that, in the course of time, by the aid of selection and careful weeding, it is practicable to establish a new breed altogether. This, in fact, has been the history of our principal breeds....

....We confess that we can not entirely admit either of the antagonistic doctrines held by the rival advocates of crossing and pure breeding. The public have reason to be grateful to the exertions of either party ; and still more have they respectively reason to be grateful to each other.....

....Let us conclude by repeating the advice that, when equal advantages can be attained by keeping a pure breed of sheep, such pure breed should unquestionably be preferred ; and that, although crossing for the purposes of the butcher may be practised with impunity, and even with advantage, yet no one should do so for the purpose of establishing a new breed, unless he has clear and well defined views of the object he seeks to accomplish, and has duly studied the principles on which it can be carried out, and is determined to bestow for the space of half a life-time his constant and unremitting attention to the discovery and removal of defects.

Sheep Husbandry......II.

Marking, etc., is more necessary in the case of sheep, than with cows and oxen, as they look more alike, and are more apt to break away from their enclosures. The system of marking dates back to the first settlement of the country, when cattle had the range of the highway and the woods, and were not seen by the owner except at long intervals. At first, each owner had his particular mark upon the ear, or elsewhere, kept upon record at the town clerk's office, and this mark was to be the evidence of ownership. Cropping, slitting, and notching the right or left ear, were the contrivances resorted to. As the country became more thickly settled, and the pastures were enclosed, owners were enabled to confine their animals to their own lands, and were less careful about marking. It is now mainly confined to sheep—the most slippery of our domestic animals—and the marking is usually made upon the wool, and, of course, has to be renewed at each shearing. The best method is to have a stamp with the initials of the owner's name, and to print the letters in large capitals upon the side of the sheep. A convenient size for the letters will be about three inches in length. The paint or ink may be made of a mixture of linseed oil, spirits of turpentine, and lamp-black. Any mixture that will leave a black mark, which the rains can not wash out, will answer.

At the time of marking, tarring should also be attended to. The tar bucket, with a swab, should stand beside the paint pot, and the nose of each sheep should be smeared with tar. This guards against the fly, which deposits her eggs in the nostrils, and produces worms or grubs in the head. The tarring may be renewed, occasionally, during the Summer. This precaution costs but a trifle, and it may save a good many sheep from disease.

Pasture.—The flock, being marked, and tarred, are now ready for pasture. Let it not be inferred, that because the sheep is a small animal and requires less than a cow, that it can live upon air. Mutton and wool can only be made of good substantial feed, of some kind. Mullens and sweet fern, with the largest admixture of brakes, and five fingers will not answer. Experience has determined, that a wet pasture is not suitable for sheep. Some part of it, at least, must be dry, substantial upland. They thrive best upon dry gravelly loams, or in high mountainous regions, without much regard to the quality of the soil. They are usually put in the pastures most remote from the farm house, as they require less care than other animals.

If the soil be poor, it should not be over stocked. Sheep should have full feed in order to thrive and pay the best profits to their owners. It is very generally observed that pastures not over fed improve every year, when stocked with sheep. All the droppings are retained upon the soil, and the grass increases from year to year. The brush should be kept down by annual cutting, especially briars, which become entangled in the wool and damage its quality.

Salting.—All ruminating animals are fond of salt and this natural appetite should be gratified. There are those who claim that it is of no use, but we always suspect such farmers of loving their ease more than the thrift of their flocks. It is some trouble to visit the flock a mile or two from home weekly, especially, if it is not done on Sunday. But the salters may claim that every flock should have a weekly visit from their owner, whether they are salted or not, so that really no time is lost in the operation.

If this is not practicable, a shelter may be made of a few boards, in some convenient part of the pasture, and the salt may be left in troughs under cover, where the sheep can help themselves. This is, perhaps, the better course in any event, as they are less liable to eat to excess where they have the article constantly on hand. In Spain, which is justly celebrated for its pure flocks, the shepherds are accustomed to give the sheep all the salt they will eat, when they return from the Summer downs or pastures. They allow about two pounds and a half, on an average, to each sheep, which is consumed in about five months. It is not given in Winter, as it is thought to produce abortion in the ewes. Sheep giving milk, require the most salt—it sharpens the appetite, and leads them to eat some coarse herbage and weeds that might otherwise not be consumed.

Destroying Ticks.—Few enemies are more troublesome than wood ticks, which cling with great tenacity to the skin, and are only exterminated by violence. They are most likely to trouble sheep that have the range of a woodland, or brush pasture. Tobacco water is an effectual remedy, not only for ticks, but for any cutaneous diseases of the flock. The ticks are found in greatest numbers upon the lambs, their flesh being preferred with a nicety of taste that would do credit to dog—or man. It is generally found necessary to apply the remedy only to the lambs of the flock. Boil a sufficient quantity of refuse tobacco, or stems, to make a strong decoction. No definite rule can be given, as it must depend somewhat upon the number of animals to be dipped. Make the liquid strong enough to kill ticks. A half hogshead makes a convenient vessel for the operation, which requires two individuals. A board is laid across the top, upon which the lamb is laid after dipping, and the liquid is squeezed out by pressing the hand over the skin. The whole body should be immersed, except the head—care being taken not to get it into the mouth or eyes. If the decoction is too strong, it will sicken the lambs and make them stagger. If the old sheep are affected with the ticks, or loss of wool from any disease of the skin, they should be dipped also.

Flesh wounds from any cause during the Summer, will need looking after. The smell of blood draws numerous flies, which lay their eggs in the flesh with as much eagerness as if life were already departed. These should have an application of tar, or of spirits of turpentine, in small quantity

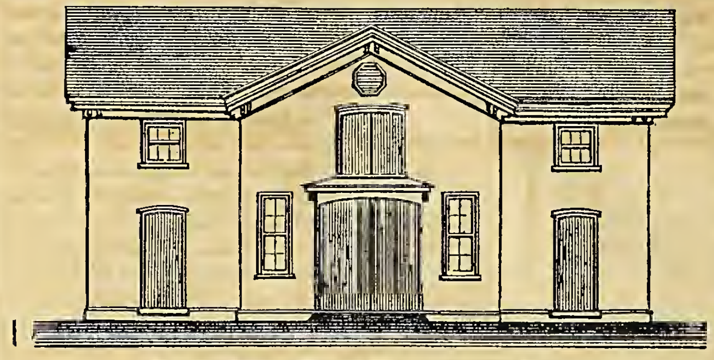


Fig. 1—South Front Elevation, on Street.

Premium Plan of a Barn.

In our February issue, p. 60, a premium was offered for a plan of a barn adapted to a particular location—and the peculiar circumstances of a friend—with the following specifications: “The barn required, is for a small plot, say four or five acres, near a village. It is to cost about $900 to $1200. It will stand on a line with the north side of a street. The internal arrangement is to comprise: A carriage floor for three four-wheeled vehicles, and one sleigh—accessible both from the street and rear; stalls for four horses, and two cows; grain and feed bins; root, and manure cellars; tool-room and workshop combined, with ample space for storing farm and garden implements; one or more rooms for storing garden truck of various kinds in Autumn; ample space for hay and straw above. Any other suggestions as to outside style, or internal arrangements and conveniences, will be taken into account. The plans may be addressed to C. T., care of this office, any time prior to March 25th.”

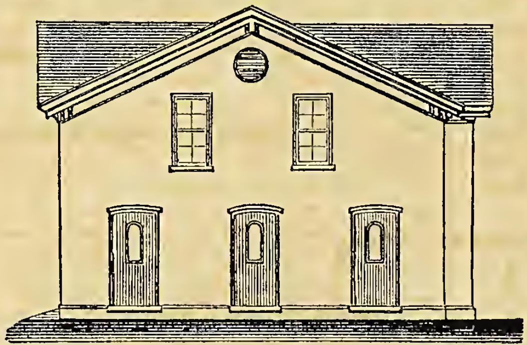


Fig. 2—West-end Elevation.

In response to the above offer, *fifty-one* plans were sent in—four of them after the time specified. These came from all parts of the country, there being one from nearly every State in the Union, and in but one instance we believe, was there more than one from the same town or county. Pennsylvania has long been noted for its large barns, so much so, that “A Pennsylvania Barn” has passed into a proverb. Eight of the fifty one plans were from that State. We were much interested and amused on looking over the plans, to observe the great diversity of opinion as to what kind of a barn would meet the requirements of the proposal; for while a few of the plans agreed in some items, there were no three which did not differ very materially in form, arrangement, construction, and size. In size they ranged from 25 by 30 feet, to 46 by 95. The variety was so great, and the accompanying suggestions so numerous, that we at first thought it would be worth while to select half or more of them, and make up a book on this special subject; but on finding that the expense for engravings, printing, etc., for an edition of 1500 copies would amount to at least $1 a copy, we concluded it would not pay, though such a book would doubtless be worth many dollars to every man who purposes to build a barn. We have learned by experience that it would take a long time to find the purchasers, and so we can do no more than give, from time to time, in the *Agriculturist*, a selection from the plans. We may use several of the best during a year or two—according as we have room, and as may appear desirable. In the present number we give the plans and specifications which were selected as being nearest the requirements of the original offer. (All the plans were put into the hands of a competent Committee, for the awarding of the premium.) The five engravings and the descriptions and specifications given herewith, are exact copies of those sent in for the premium. As there are some features in this plan similar to other plans contributed, it is due to Mr. Ranlett to say that every part of this plan was original with him—his plans having been completed and sent in before the other plans were examined. They were accompanied by a proposal from a responsible Master Builder “to complete the structure in exact accordance with the plans and specifications, for $1135, if at a conveniently accessible point within twenty miles of the City of New-York.” [In our next, we will give a plan of a barn now being constructed on our own place, which *we* think a model one, embracing every convenience we could get into a building of this kind.]

Plans and Specifications for a Barn and Carriage-House, as called for in the American Agriculturist for Feb, 1860.

By Wm. H. Ranlett, Architect, 52 John-st., N.Y.

Fig. 1.—South front entrance elevation.

Fig. 2.—West end elevation.

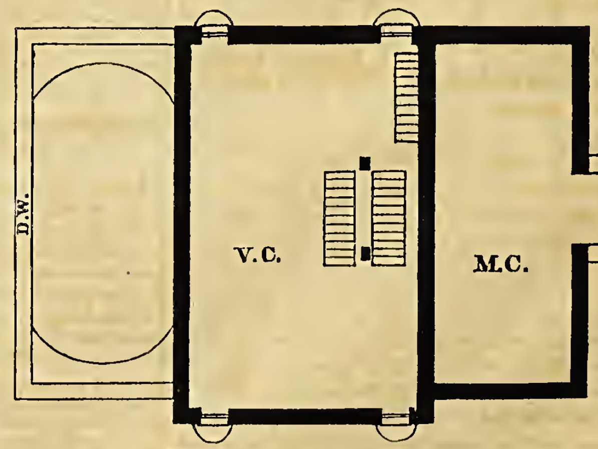


Fig. 3.—Cellars and Foundation.

Fig. 3—*Plan of Cellars and Foundation.—D.W.* Dwarf walls, 2 ft. 6 in. deep, 16 in. thick—*V.C.*, Vegetable cellar, 18½ by 30 feet, 6½ feet in the

clear—*M.C.*, Manure cellar, 11 by 27½, 6½ feet in the clear; walls 18 in. thick—*A.W.*, Area walls.

Fig. 4.—*Ground Plan of Stalls, Carriage, Tool, and Garden Truck Rooms, Workshop, etc.*—*A*, Carriage room, 15 by 32, less corner out 6 by 10 —*B*, Garden truck 10½ by 12½—*C*, Tool room, 9 by 12½—*D*, Work shop, 10 by 18—*E*, Harness room, 6 by 11½—*F*, Feeding hall, 6 by 18, and 3 by 11½ passage—*G*, *G*, Cow stalls 9 by 11½, and 4½ by 11½—*H*, *H*, *H*, Horse stalls, each 4½ by 12 feet—*I*, Passage, which may be used for a stall—*J*, Lock-up for stable furniture, 3 by 5—*k*, *k*, Feed and grain bins—*l*, Stairway to loft—*m*, *m*, Trap doors to vegetable cellar and to hay loft—*o*, Ladder for fowls to enter their roosting and laying room—*w*, *g*, Urine gutter. Trap doors to manure cellar where wanted.

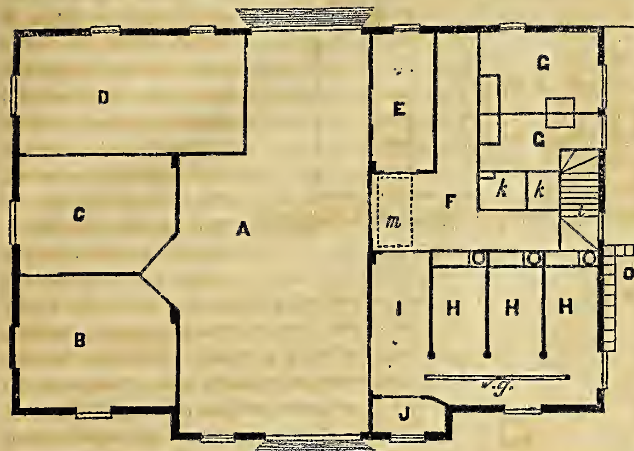


Fig. 4.—Glound Floor Plan

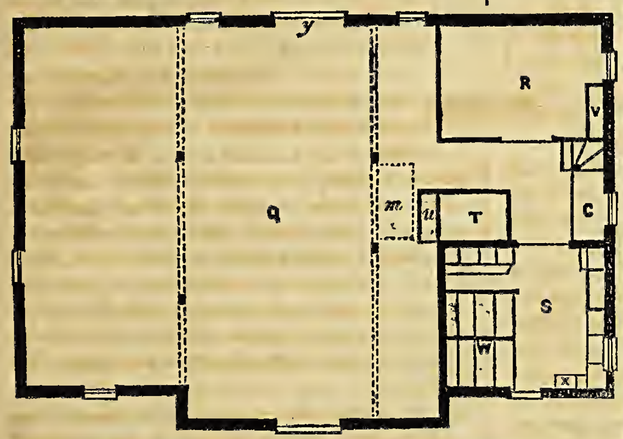


Fig. 5.—Chamber or Second Story Plan.

Fig. 5.—*Second Floor*, containing: *Q*, Hay loft, 31 by 33 feet—*R*, Bed room, 9½ by 12—*S*, Fowl room, 12 by 12—*T*, Grain bin, 4½ by 4½ by 6 feet —*u*, Hay slide, 1½ by 4½—*V*, *V*, Ventilators from the cow and horse stalls to the pediment window —*W*, Roosts for 25 hens—*X*, Entrance for the fowls from the ladder—*y*, *y*, Windows to receive the hay in the loft.

Specifications of the materials and labor required to erect the building according to the plans:

Excavations made to receive main, and dwarf walls; stone work laid in lime and sand mortar; division wall between the cellars in hydraulic cement; hard brick walls around the cellar windows; fowl room lathed and plastered complete. Timber, sound spruce and pine, sawed and strongly framed and braced in every part; sills, posts, and plates, 4x9; framing beams 4x8; girts 4x6; first tier beams 3x9, 20 inches apart; second tier beams 3x8, 16 inches between centers, with one tier cross bridging over carriage room; rafters 2x8, 30 inches apart; valley rafters 2x10; studding 3x4, set 2 feet between centers; water table and corner boards 1¼ in.; uprights covered with ¾ planed and rebated pine boards clear of defects; rafters covered with thick hemlock boards, and overlaid with one cross charcoal tin; 3 inch tin leaders to convey the water from the roof; moulded cornices to the cover and pediments, supported by 3 inch brackets; two pair outside and 7 single doors, made with narrow, clear 1⅛ tongued and grooved boards, strongly battened, and planed both sides—three of the doors to have sashes, 2 lights 9x15 glass; two pairs of loft shutters made in same manner; doors hung by welded straps and hooks, and secured with hooks, bars and locks, as required; eight windows, 8 lights each, 9x14 glass in first story, with batten shutters, hung by butts, and secured by bolts; five windows, 8 lights, and four windows, 6 lights, 9x14 glass, in second story; round and octagon blind ventilators in all the pediments; four 6-light windows, 10x12 glass to cellar, with inside shutters; door and window frames made of 1¼ inch plank with heads and casing of the same; floors of milled spruce plank; stall floor overlaid with 2-inch spruce plank, with suitable manure traps and urine gutters; divisions in the horse stalls of 2-inch plank, hip posts 6 feet high 6 inches diameter; partitions and divisions in cow stalls of 1¼ spruce plank 4 feet high; all feed boxes made with milled spruce plank capped with iron plate; main and room partition, of milled spruce plank planed both sides, strongly secured in the middle by a 2x4 strip; all interior doors made with ⅞-inch tongued and grooved boards battened, and planed both sides, hung by H L hinges, and fastened with thumb latches and bolts; stall sides lined with tongued and grooved boards 6 feet high and capped; feed bins with milled plank; hay and feed slides and stall ventilators of boards tongued and grooved, and secured by bands; suitable tight stairs to loft, and strong step ladder to cellar; a plank ladder for the fowls to enter their room in loft; fowl room fitted up with roosts and laying boxes, lattice over the windows, etc., complete; harness room fitted up with hooks, saddle and harness pins; manure area covered with 2-inch plank battened, and a trap-door strongly hung. All the outside of the building, tin roof and leaders, and the outside doors inside, and inside of wooden shutters, to be painted two coats of linseed oil and white lead.

* * *

What Shall be Done with the Dogs?...III.

WISCONSIN DOG LAWS.

Copies of the following have been forwarded by six or eight subscribers in Wisconsin, who will please accept our thanks. By thus "keeping the subject before the people" it is hoped sufficient attention will be awakened to secure the passage of efficient Dog laws in every State. A comparison of the different acts published, will give suggestions and data for improvement in subsequent statutes.

AN ACT to regulate and license the keeping of dogs.

Sec. 1. Every owner or keeper of a dog shall on or before the first Tuesday of April in each year, cause it to be registered, numbered, described and licensed for one year from that date in the clerk's office of the city, incorporated village, or town where he resides and shall pay for such license one dollar for every male dog, six months old and upwards, and three dollars for every female dog six months and upwards. The license shall be issued and the money received by said clerk, who shall pay the same into the treasury of said city, incorporated village, or town, to be used and appropriated with the other funds therein; and the clerk shall receive for each license so issued and collar stamped the sum of ten cents, out of said funds. The treasurer shall keep an accurate and separate account of all sums received and paid out under the various provisions of this act, which account shall always be open to the inspection of any voter of the place.

Sec. 2. The owner of every dog so licensed shall keep a collar around its neck distinctly marked with the name of the owner registered, numbered, and the year for which such dog is licensed, which date shall be stamped on said collar by the officer issuing said license, and for the purpose of enabling such officer to so stamp the collar with the year for which he shall issue a license as aforesaid, it shall be the duty of the proper authorities of cities, incorporated villages, and towns to furnish such officers with a proper stamp for such purpose.

Sec. 3. Any person may, and every police officer, constable or marshal, shall kill or cause to be destroyed, all dogs going at large and not licensed and collared according to the provisions of this act; officers shall receive from the city or town treasurer, twenty-five cents for each dog so destroyed and buried by them.

Sec. 4. Whoever shall remove the collar from the neck of a dog so licensed and collared, without the knowledge and consent of the owner, or steal a dog so licensed and collared, or shall alter the stamp on such collar, shall be punished by fine not exceeding fifty dollars.

Sec. 5. The owner of any sheep or lambs suffering loss by reason of worrying, maiming or killing thereof by dogs, may present within thirty days after such loss shall come to his knowledge, to the Mayor or Alderman of the city, the President or Trustees of any incorporated village or Supervisors of the town wherein the damage is done, proof thereof, and thereupon the said officers shall draw an order in favor of the owner of said sheep or lambs upon the treasurer of said city, incorporated village or town, for the amount of such loss. The treasurer shall register all such orders in full at the time of their presentation, and shall annually on the first Tuesday in April, pay all such orders in full if the gross amount received by said city, incorporated village or town, under the provisions of this act, up to such date, after deducting all sums previously paid out under such provisions be sufficient therefor; otherwise the treasurer shall divide said amount, after deducting as aforesaid, pro rata among said orders and in full discharge thereof.

Sec. 6. Upon drawing an order as is provided in the foregoing section, the city, incorporated village, or town may recover against the keeper or owner of any dog or dogs concerned in doing the damages, the full amount of the damages done.

Sec. 7. Whoever keeps a dog not registered, numbered, described and licensed according to the provisions of this act, shall forfeit the sum of five dollars to the use of the town, city or village wherein the dog is kept.

Sec. 8. Owners of dogs may at any time have them licensed until the first Tuesday in April succeeding, upon payment to the clerk of the sums provided in the first section of this act, but such payment and license shall not exempt them from the penalties of the preceding section on any complaint already made.

Sec. 9. No new license for the then current year shall be required upon the removal of any licensed dog into any other town, or city, or incorporated village, unless the same be required by some by-law or ordinance passed under the provisions of the twelfth section of this act.

Sec. 10. The Mayor and Aldermen of any city, President and Trustees of any incorporated village, and the Supervisors of each town shall require all dogs not licensed and collared according to the provisions of this act, to be destroyed by poison or otherwise as they may ordain, and shall enforce all the penalties herein provided.

Sec. 11. Any officer of any city, town or incorporated village, who shall refuse or neglect to perform the duties imposed upon him by this act, shall be punished by fine not exceeding twenty dollars for every twenty-four hours which he shall so neglect or refuse, which shall be paid into the treasury of such town, city or incorporated village.

Sec. 12. The City Council of any city, the trustees of any incorporated village, and the supervisors of any town may make such additional by-laws and regulations concerning the licensing and restraining of dogs as they may deem expedient, and may affix any additional penalties not exceeding ten dollars for any breach thereof, said by-laws and regulations shall relate only to such dogs as are owned or kept in such city, incorporated village or town not conflicting with the provisions of this act, and the annual fee required for a license shall not exceed one dollar in addition to the sum required by the first section of this act.

Sec. 13. All fines and forfeitures imposed as a penalty for the violation of any of the provisions of this act, or neglect of any duty imposed by the same, shall be presented by complaint before a Justice of the Peace of the proper jurisdiction, and no mere technical objection to the complaint shall be alleged to defeat a prosecution so commenced, and prosecutions for fines and forfeitures under this act shall be in the name of the State of Wisconsin.

Sec. 14. In all cases under the provisions of this act, when any person or corporation shall be entitled to recover damages, the same shall be recovered in a civil action, prosecuted according to the laws of this State, and in cases where the action shall be prosecuted by a city, the action shall be prosecuted by the Mayor or chief officer of such city as plaintiff, and when the action shall be prosecuted by an incorporated village, the action shall be in the name of the principal officer of such village, as plaintiff, and when the action shall be prosecuted by a town, then the chairman of the Board of Supervisors shall be the plaintiff.

Sec. 15. All acts inconsistent with the provisions of this act are hereby repealed; *Provided*, That nothing in this act shall be construed as to repeal chapter 48 of the Revised Statutes, and said chapter 48 is hereby declared to be and to remain in full force.

Sec. 16. This act shall take effect and be in force from and after its passage and publication.

Contraction of Horses' Feet.

This is not so great a misfortune, as some suppose. It is an unnatural condition of the hoof, but it does not necessarily produce unsoundness. If a horse has good action, and is otherwise unexceptionable, he is hardly less valuable for a slight contraction of the foot. Still, we should try to prevent it.

Bad shoeing is one cause of contraction. The blacksmith sometimes cuts away a part of the frog, which causes it to loose some of its moisture and elasticity. Then, again, he makes the shoe too much inclined inward from the outside, which prevents the natural expansion of the hoof. A pressure is thereby made upon the tender parts of the foot, and hence come fever and lameness, corns and unnatural deposits of hoof. The shoe should be made perfectly level "on the quarters," so as to allow the natural expansion of the foot. The shoes, moreover, should be forged, not twisted into shape, as is sometimes done by bungling workmen. As a general rule, shoes are worn too long without resetting. Every three or four weeks, they should be taken off, the toe shortened in, the sole thinned, and the heels lowered.

Contraction is often caused in stable-horses, by want of natural moisture. Where there is a strong tendency to contraction, the hoof should be "stopped" or plugged with a mixture of cow-dung and clay. Or, better still, a piece of thick felt, cut to the shape of the sole, and soaked in water, should be applied daily.

The broad, flat foot of the cart-horse, is seldom troubled with contraction. Blood horses are quite liable to it.

Ordinary cases of contraction will be cured by the treatment above suggested; but where it becomes excessive, and is combined with any other disease, the animal should be put under the care of a skillful veterinary surgeon. We will only add that horses of our own have been cured by turning them out to pasture for several months, wearing, meanwhile, very light shoes, and these frequently changed. *

Raising Silk Worms' Eggs—Will it Pay?

During the past year we have received repeated inquiries from abroad, as to whether eggs of the Silk Worm could be obtained in this country. The parties applying state that the worms in the silk producing regions of Europe have become diseased to an extent that threatens to seriously affect this branch of industry; perhaps to destroy it, unless supplies of eggs from healthy worms can be procured. Recently, parties in this City have renewed the inquiry, stating that after considerable search they find silk-culture in the United States almost if not quite extinct. The last census report showed that in 1844, this country produced 396,796 lbs. of cocoons, of which 176,210 were raised in Connecticut alone. Some of our readers may know by experience the cause of failure after such a start had been made. It resulted mainly from the comparatively high price of labor, preventing successful competition with European manufactures, and also from the want of practical experience in the business. Many persons expecting an immediate fortune, experimented a year or two, swelling the amount produced to a large aggregate, but abandoned it when their fever was cured by copious bleeding at the pocket.

A correspondent suggests that although it may not be practicable at present, in this country, to roduce silk profitably, yet the rearing of worms to produce eggs for export would be remunerative. He says a hundred pounds of cocoons are worth seventy dollars for silk, but the same amount of cocoons left to produce insects, would yield six pounds of eggs worth twenty eight dollars per pound, amounting to one hundred and sixty eight dollars, which he says would pay well.

It might be profitable in some localities where mulberry trees still survive, provided one or two things are certain. First, it should be known whether worms raised from eggs produced here, would remain healthy in Europe. If the disease there exists only as a hereditary taint, eggs brought from new sources would be valuable; but if the worms contract the infection from some other cause, then the imported stock would be equally exposed to it, and would soon have no sale. Again, the disease may be only of temporary duration, and the demand would then cease when a healthy progeny could be secured at home. From these considerations we could hardly advise any extensive operations in this line, at least until some definite prices could be assured for a sufficient time to warrant necessary outlay.

Deep Plowing—Is it Injurious?

A Texas subscriber writes to the *Agriculturist* as follows: Last Fall I plowed a field very deeply, using a team of five yoke of oxen, going down eighteen to twenty inches. It was plowed again this Spring, and wheat and corn were put in. The soil is rich, black and partly sandy clay. The wheat looks well, and shows a fine, healthy green color, but the corn is only six inches high, while corn planted at the same time on land plowed not so deep, is two or three feet high. After such experience one would think it better to adopt the Mexican method; they scratch their land open a little with an old wooden plow, and usually secure good crops of corn. What do you advise?

Remarks.—Where too much of poor subsoil is brought at once to the surface, it will, at first, yield but poorly. In many sections substances poisonous to vegetation, chiefly salts of iron, are found at a depth of from ten to twenty inches, and these will act unfavorably, until rendered harmless by exposure to the air. It is better in such soils, to deepen gradually, say an inch or two at each plowing. Still our correspondent need not despair from the seeming ill success of this first experiment. Subsequent deep working of the land, with proper manuring, will ultimately give a seed bed that will yield sufficient to more than repay temporary loss. Even during the present season, should a period of drouth occur, he may find the deep plowing to have been profitable. The results of this year can only be told when the crop is harvested. We should be pleased to know what story the corn crib tells next Fall.

Stirring the Soil in Drouth.

An old topic, surely, but one of the greatest practical importance. An old topic, but one about which men are not agreed in opinion. There is theory and practice on both sides. Some farmers hold that stirring the earth in dry weather, injures the roots of plants, and exposes the soil to the sun and the dry air so much, as to do more harm than good. But the other side of the question has, also, its good arguments. We will hint at one or two:

Frequent stirring of the soil in drouth renders it more porous, and so fits it to absorb moisture from the atmosphere, and to draw it up from the wet subsoil. By being frequently broken up it becomes like a sponge. Any one can easily satisfy himself of this. Go into your garden and loosen up the soil over a space of a few feet square, and then see if, for several mornings after, that patch is not moist, while the surrounding surface is dry? A neighbor of ours had a potato patch last Summer, which being in a warm and sandy soil became badly parched in July. The stalks drooped, and a total loss of the crop was threatened. Here was a fair subject for a desperate experiment. Accordingly, on one of the hottest and dryest days of the month, he gave them a thorough plowing, passing the plow four times through each furrow, first plowing two furrows from the hills, and then returning the ground back by two other furrows. No rain fell for ten days after. In three days, the vines stood erect and began to take on a dark green color and to grow again. The soil was moistened by the dews of every night; the crop was saved, and it proved quite an abundant one.

Again: the stirring of the soil in drouth renders the earth a poorer conductor of heat than it would be if it remained unbroken and hard. Every one knows that a stone or any metallic substance lying in the sun, becomes hotter than a bunch of cotton, because it is a better conductor of heat. So, when the surface of the earth becomes baked and hard, it absorbs heat much more than when it is broken and pulverized. In a well-tilled garden, the ground, two or three inches below the surface, is quite cool at midday. It is partly on the same principle, that a few inches of mulching material will keep the ground cool and moist all Summer long. Hence, it is easy to see that stirring the soil in drouth will keep the roots of plants cool and moist, and so promote their growth.

But let the theory be as it may, the fact remains, that thorough tillage is the best possible security against drouth.

A Word for Weeds.

Our neighbor has just made an argument for weeds, which should not go unpublished. "I let them grow in my garden," he says, "to keep off the hot sun and the bugs from my cucumbers. I would not, indeed, let enough grow to exactly smother the vines, but enough to keep off the insects, and to shade the ground and keep it cool." As he said this, the muscles of his face seemed a little disturbed, as though he half distrusted his own theory, but he kept his countenance quite well.

What a dunce! Even if the leaves shade the ground, what do the roots do meanwhile? Pump it of its moisture and send the vapor off into mid-air, rendering the soil dryer than it would have been if exposed to the full rays of the sun. Let any one try the experiment, and he will be satisfied. And then, as to protecting the vines from bugs, we very much question it. No, no. The only rational way to garden successfully, is to keep down the weeds. If the ground is suffering from drouth, run the cultivator through it, keep the hoes bright, and this will keep the soil in the best possible condition for absorbing the nightly dews. Cultivate the cucumbers well, surround them with boxes, and they will soon run away from the insects.

QUESTIONS FOR THE N. Y. FARMERS' CLUB.

Will *soiling* improve *neat* cattle?

Which will make the best *butt-er*, an Ayreshire cow, or a Southdown buck?

Will the introduction of short-*horns* be favorable to the temperance cause?

A Single Ounce of Seed!

Mr. Lyman Strong, of Greene County, N. Y., writes that the ounce of improved oats received through the seed distribution of the *American Agriculturist* in the Spring of 1858, increased to *seven bushels* in the crop of 1859, which is at the rate of about 67 fold increase in each of the two years. Only careful sowing and culture could have produced so large a yield; but the result shows how soon a little parcel of good seed may increase to a large amount. If the same increase of 67 fold, should be obtained this year and next, the crop of 1861 would be over *thirty one thousand bushels* (31,486 bushels!) in 3½ years from the reception of the ounce parcel. This is of course a much larger increase than could be obtained in any ordinary culture; but most other seeds multiply faster than oats, and some idea can be formed of the enormous product being obtained this very year from the million or more of separate parcels of seed distributed from the *American Agriculturist* office free to subscribers, during the past four years alone.

Timothy Bunker, Esq., at the New-York Central Park.

Mr. Editor: I have heern tell a great deal about your Park, that Mr. Olmstead is fixing up for your city folks, on the upper end of your island. Every body that went down to the city from our place, had a good deal to say about it, and the lots of money they was laying out there in making hills higher, and hollows hollower, building bridges where there wan't any brooks, and putting pond holes where there used to be dry land, making a clearing where there was a forest, and putting trees where there was cleared land. I expect they talked all the more about it, because Mr. Olmstead was a Connecticut man, and used to live close by us up here in Hookertown.

Mrs. Bunker was a good deal stirred up about these accounts, and thought she should like to see the thing for herself. Sally has n't said a word about visiting since she got back from down South. She thought then, she said, she should never care to get out of sight of Connecticut again as long as she lived. She has held of that mind until this Spring, and has hardly been out of Hookertown street, except to go down to Shadtown to see the baby. I have stuck pretty close to home myself, thinking that Hookertown was about as nigh the hub of the universe, as any other spot in this country. So, one day last week, Mrs. Bunker says to me, "Timothy, have you read in the papers what Fred. Olmstead is doing down there in the city?"

"Well, yes, I have read some things, and heern a good deal more."

"They say the city is fixing up a sort of country place, to walk and ride in, and Fred. is telling 'em how to spend several millions on brush pasture, and sheep walks, and tad-pole ponds!"

"Suppose you go down and see, Sally; I have a little business in the city, and shall be glad of your company."

Mrs. Bunker's trunk was packed next day, and we took the boat for the city. At first, she was inclined to think the whole story was a hoax, for she did not see, where houses were so plenty, how folks could find any room for pastures, and woodlands. But after riding up on a railroad that went by horses, six or seven miles, with houses and stores on both sides, considerable thicker than they are on Hookertown street, and we began to get sight of some vacant lots and trees, she thought there might be something in it. The city pretty much faded out after a while, and we came to a place they told us was the Park. We found some very wide roads, they called avenues, about as smooth as a barn floor, and wide enough for six loads of hay to drive along abreast. "Now," exclaims Mrs. Bunker, "what are these people thinking of! Don't they expect to leave the road behind them when they ride out! Fred. ought to have told them better than that." I should think there were more people at work there, than we have got on all the farms in Hookertown, some drilling rooks, some carting stone, some setting out trees, and some moving dirt from one place to another, without any particular object in view. I could n't help thinking what lots of corn and potatoes, they would raise this Summer, if they were only working on farms.

They called one place a Ramble, and had guide boards put up, all round, pointing that way, as if it was something remarkable. Mrs. Bunker said it reminded her, for all the world, of Uncle Jotham Sparrowgrass's cow pasture, before he drained the musk-rat pond, and she didn't think the lay of the land was a bit handsomer."

It is curious to see how folks' minds work. Here in the country, the great object seems to be, to get rid of water, rocks, and brush. You see I spent considerable in draining the horse pond, and Uncle Jotham made dry land where the musk rats built their nests. But Fred. Olmstead has got things turned tother end foremost, and gone and filled up a valley of well nigh twenty acres with water, and made all the shores of the pond as crooked as a ram's horn. I should n't think there was a rod of it any where in a straight line. Then, in the country, we plow up huckleberry brush, sweet fern, alders, hard hack, and all such stuff, glad enough to get rid of them. But down there, we saw lots of huckleberries, blackberries, brakes, and things of that kind, put round into the shy places, as if they were something very nice.

In one spot, I remember, we came upon a sluggish little pond hole, with rushes, lily pads, pickerel weed, and other water plants, and on the banks a rank patch of skunk cabbage. At the sight of this last plant, Mrs. Bunker put on her spectacles to see if she wan't mistaken, and then burst into such a fit of laughter, that, one spell, I thought I should have to call a policeman to stop her. The idea of cultivating that savory article in a flower garden, seemed to upset all her notions of propriety.

Up here, in the country, we take a good deal of pains to bury the rocks, and get them out of sight. In the Park, we saw a good many places where the dirt had been removed to bring the rocks into view, and in one place they had dug a great ditch, clear from the pond away under a great boulder, as big as a small meeting-house. They were fixing it up for a grotto, I believe they called it, and they said it would cost five thousand dollars. It looked pretty much like Dick Sanders' saw-mill flume, or, Mrs. Bunker said she thought it would, when the moss got grown upon the rocks around—I thought it was a smashing price for a big rock. In another place they had tumbled a great lot of smaller rocks into a swale, and turned on a spout of Croton water to make it look like a brook. Now it run down under the stones out of sight, and again it run over one long flat rock, and fell down six or eight feet into a pool. This they called a cascade, but it looked to me just like a water-fall in a trout brook, only it wan't half so handsome. They said this concern cost over eight thousand dollars, and that is mor'n Dick Sanders' whole farm is worth, saw mill, trout brook, and all. The little walks around the place they called the Ramble, Mrs. Bunker said, made her think, for all the world, of a huckleberry pasture full of rabbit paths, and she didn't believe but Fred. Olmstead had just made a map of some place up here on our hills, and told his hired men to mark it out accordingly. It was a pretty woodsy place, she admitted, but thought the city folks were paying pretty dear for their whistle.

That may be so, but I suppose they have earned their money, and can spend it as they please. I couldn't help thinking that it was enough sight cheaper for a man, if he has a longing for such things, to export himself into the country, than to try and import the country into the city, where, at best, he only got a small sample, and not a very perfect specimen at that. I have n't a doubt that Mr. Olmstead has done his work as well as any body could, but it seems to me that we who till the soil, get rather better looking trout brooks, water falls, and bush pastures at a more reasonable rate. We came home thinking that we were about as well off as our neighbors, content to live in a region where trout brooks run naturally, and where brakes and ferns, bull rushes and pond lilies are the portion of every man's farm. It is a great country where skunk cabbage is grown in the flower gardens.

Yours to command,

Hookertown, Ct., June, 1860.] Timothy Bunker, Esq.

[We generally let 'Squire Bunker have his say in his own words, for he utters a good many solid truths in his way. His intended criticisms upon *our* Central Park we think are about the best puff it has had—it looks so country like, so "woodsy" that it seemed just like the country to our rural visitors, and that is exactly what is aimed at. Ed.]

Chicory a Substitute for Coffee.

To the Editor of the American Agriculturist.

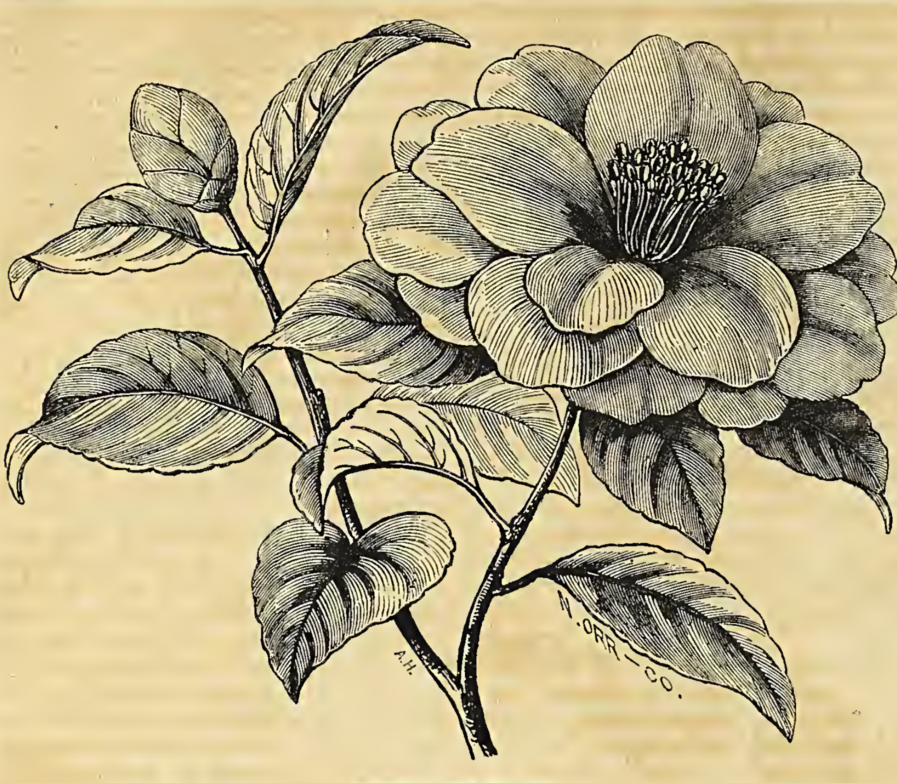
In the February and April Nos. of last volume, you speak of chicory as having a deleterious influence upon the human system, inducing sleeplessness, etc., and say you should deprecate its general introduction as an article for the table to supersede coffee. Now, with all due deference, I must beg leave to speak most unqualifiedly in its praise. It was introduced to my notice some six or seven years since by a physician, and recommended, as having been analyzed and found to possess no injurious qualities; since that time I have raised it in my garden every year, and have used no other coffee, and for a good part of the time it has superseded not only coffee, but tea. I ask for no better coffee or tea, and so far as my experience goes, it is perfectly healthy. It is raised with very little trouble—a row or two by the side of a path in the garden will supply any small family for the year. Persons whose *heads* will not allow them to use coffee, can use chicory with impunity, and when properly prepared, a stranger, however good a judge of coffee, could not distinguish it from the best Java. This I have proved by experiment, and I hope it will be generally introduced; it would be a great saving to any family, as they can raise their own coffee, if they have even half a rod of ground.

New-London Co., Conn. DAVID BREED.

[What is one man's meat is another's poison, and so of drinks. The testimony of medical men, and others, is too strong to allow a general recommendation of chicory as a beverage.—Ed.]

Confidence is the companion of success.

A Book for the Million.—Astor's bank book



CAMELLIA DRIKELLARII.

Beautiful Flowering Plants and Shrubs.

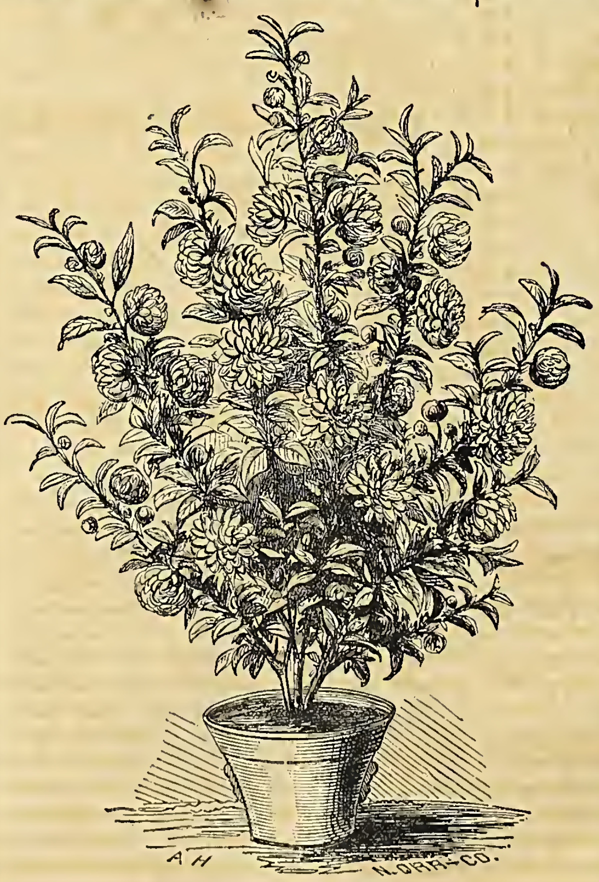
CAMELLIAS.

In a stroll through the extensive glass-houses of Parsons & Co., some time since, we noticed many fine plants in bloom, which we thought most of our distant subscribers would be glad to see. But as this was not practicable, we dispatched our artist to prepare drawings of several of them, that they might be engraved and published in the *Agriculturist*, from time to time. Here we present the first specimens, with sundry useful practical suggestions upon their culture:

Camellia Drikellarii. This is a representative of the large and noble family of Camellia. And a noble family, indeed, it is! Seldom do you see a dozen house-plants without several of these being found among them; and in a green-house they always occupy a large and important place. Their elegance of form, the deep verdure of their glossy foliage, and the pure and brilliant colors, combine to raise them to a very high rank in the floral kingdom. Of camellias proper, there are some eight distinct species, and of the varieties C. *japonica*, there are probably about one thousand.

It would be hard to find a more attractive sight than a large collection when in bloom. We have seen several hundred different varieties open at one time in extensive houses devoted to these alone. Though the general form of the flowers was quite similar, and but a few distinct colors were displayed, these were so interwoven, and passed from one tint to another by such delicate shading, one could but feel it was the work of a Master hand, bringing out the highest results of beauty with the simplest materials. Can we chide an enthusiast for his love of flowers, when their perfection has employed the mind, and exhibited the matchless skill of the Creator?

While the green-house is the proper home of the camellia, yet it may be cultivated in the parlor or living-room. The great evils which it has to contend with in ordinary dwellings are: too sudden changes from heat to cold (or *vice versa*,) and a dry and dusty atmosphere. The camellia will bear a good degree of cold, but a sudden change harms it. Therefore, it should be kept where the temperature is nearly uniform. Far to the north, it is an excellent plan to have double windows before the plants, the inner sash being hung casement-like, so as to be opened by day and shut by night, or to be kept closed continually, when necessary, in very cold weather.



PRUNUS SINENSIS.

This uniformity of temperature is specially important on the approach of the blooming season. Then, the mercury should never be allowed to fall below 50° Fahrenheit. Give the plants a regular daily watering, not a deluge, nor a mere sprinkling, but just so much as the roots will easily absorb. By a little experience, one can ascertain the condition of the soil, as to wetness, by simply rapping the pot with his knuckles. If dry, the sound will be hollow. The weight of the pot helps also to the same result. When blooming has fairly commenced, we may improve the size and richness of the flowers by giving the plants a dose of guano-water once a week,—using a pound of guano to ten gallons of water. When the flowering season is over, and the wood growth commences, guano-water should be used twice or three times a week. Does any one ask why? it is to secure a strong growth of wood and of blossom-buds for the next year. Every thing depends on the healthy growth of the plants during the present three or four weeks. Give them, therefore, an abundance of light, air, and plant-food during this important period.

Let no one forget that the Camellia lives by breathing as truly as by eating. Its breathing places are small, and are apt to get choked up by dust. The leaves, therefore, should be washed with a soft sponge, or be syringed once in ten days, the water being just blood-warm

The best soil for this plant is a mixture of one-half turfy loam, one-third old manure, and the rest leaf mold from the woods. A little sand will serve to keep the soil free and light. These ingredients should be well incorporated together, forming a light porous mass, in every part of which the roots can easily make their way and find appropriate nourishment. It is the practice of successful florists to prepare a quantity of this soil several months before it is wanted for use, and to frequently turn and mix it, cutting the turf fine, but not sifting it.

The safest and best time to re-pot Camellias is soon after the new growth is made, when the young leaves are fully out, the end of the new wood, at the point of union with the wood of the previous year begins to turn brown, and the flower buds can just be seen. Place in the bottom of the pot an inch of broken bits of pottery or brick, and a little coarse charcoal over these, to give free drainage, and place a layer of moss above the charcoal. The ball of earth around the roots of the plant to be changed should be rather moist; and if very pot-bound, the roots having crowded to the outside of the ball, immerse it in water about an hour and let it drain a day before potting. Let the potting soil be moderately dry, and fill in around the ball with regular layers, pressing it rather firm, leaving no vacant space. After potting, the plants should be placed under cover, and protected from the sun and drying winds for a few weeks.

Prunus Sinensis albo pleno. — All of this Latin covers up a very pretty plant, and means simply this: A shrub from China, belonging to the Plum family, and having double and pure white flowers. It was first brought into notice, we believe, by Henderson & Co., florists in London, in 1854, and introduced here in 1857, and is rapidly becoming a favorite. All propagated up to this time by Messrs. Parsons have had a ready sale. In form and habit it resembles the well known Flowering Almond. The foliage is similar to that of the Deutzia *gracilis*. The exquisite, pure white blossoms appear in May, opening at the same time with the leaf buds. They are formed like those of the Flowering Almond and completely load the delicate branches. The shrub is easily propagated by cuttings, layers or suckers, makes a very rapid growth and is perfectly hardy. In this it exceeds the Almond; the branches of the latter usually have several inches of the end winter-killed, and look unsightly, unless well trimmed. We saw cuttings made last year, in full flower this Spring, which shows its rapid development. It remains in bloom in the open grounds from two to three weeks, according to the weather, its snowy whiteness contrasting admirably with the grass and foliage of the lawn. When full grown it stands about three feet high, and spreads out over a space four or five feet in diameter—or if the suckers are left, it will extend over a large area. In some situations on the lawn masses of this shrub would be desirable acquisitions. It would also look well interspersed among dwarf snowballs and lilacs.

The specimen we have here illustrated was potted and removed to the green-house last Fall, and forced into flower in February. It bears this treatment well, and is thus a fine ornament for the conservatory.

In cultivating this shrub, no particular directions are needed beyond what should be observed for all plants. It will grow as easily as a currant bush, but to secure fine and abundant bloom, it needs, like most other shrubs, deep, mellow, and rich soil, kept free from weeds, with proper pruning to form a well shaped head. The plants may be layered when beginning their growth, and cuttings taken when that growth is completed.

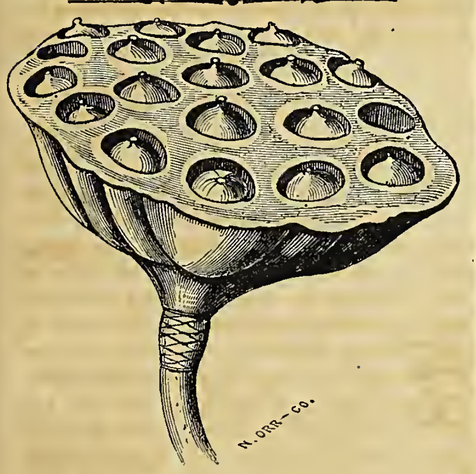


Fig. 1.

A Vegetable Curiosity.

NELUMBIUM LUTEUM.

Several months since, a subscriber, Mr. Wm. Kussman, Bolivar Co., Miss., forwarded to the *Agriculturist* office, a singular looking object, which has excited no little curiosity. "What is it?" has been asked so many times by visitors, that we have thought an engraving and description would interest our readers. Mr. Kussman gave in substance, this account of it. "It is the entire seed-top of a weed which grows in one of our lakes, and is here called the 'Kenaukee nut.' It has a very large leaf. The nuts are eaten by cattle, and wild geese. Children, too, are fond of them." Fig. 1, is an accurate representation of the specimen received. At first sight it does not look like a natural product, but appears as if some one had amused himself by sticking acorns into an enormous toad-stool which had dried up and held them thus enclosed. On overhauling some of our botanical recollections we remember to have once seen the plant in all its glory—and a fine sight it was, for there is none of our native plants that exceeds it in the size of its foliage and flowers. The plant is known as the Water Chinquapin, or Egyptian Bean, and is the *Nelumbium luteum* of botanists. It is nearly related to the beautiful and well known water-lily, but that is small in comparison with this. The stem of the Nelumbium lays prostrate in the mud and throws up circular leaves of enormous size, being often two feet in diameter. These are attached to the leaf stalk at the center—from which strong ribs run, upon the under side, to the margin, like the sticks of an umbrella; the leaf is not perfectly flat, but is depressed in the center to form a cup like cavity. The stalks bearing the flowers, also arise from the prostrate stem, and bear a single flower of a delicate yellow color. The second engraving (fig. 2) gives a good idea of the general appearance of the flower, which is 6 inches or more in diameter; before it is fully expanded it resembles a small summer-cabbage. After the flower falls away, the pistil (in the center of the flower) enlarges very much, and ultimately becomes the curious fruit. The specimen from which our engraving is taken, is four inches across. We can get an idea of the structure of this fruit, which is so different from any other, by looking at that of the common Buttercup, after the flower has fallen off; we find here a little rounded head of distinct fruits (commonly mistaken for seeds,) all collected at the end of the flower-stalk; if we now imagine the end of the stalk on which they are situated to be very much expanded, so as to bring these fruits all on a level, and to enlarge in such a way as to include them in its substance, we shall have the botanist's view of the nature of the fruit of the Nelumbium. The acorn-like bodies are separate fruits, imbedded in the swollen end of the flower-stalk. These separate fruits contain but one seed each, which is pleasant and eatable. The root bears tubers some thing like Sweet Potatoes in shape, and they are said to be, when well cooked, as palatable and nutritious as the potato; both these and the seeds are favorite articles of food with the Western Indians.

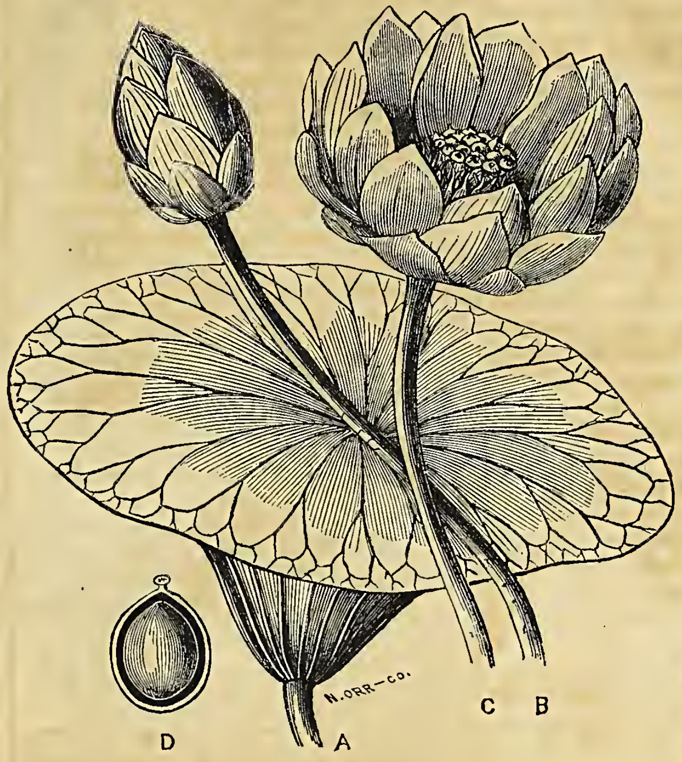


Fig. 2.

The plant is found in the rivers and lakes of the West and South; at the East it is found only in the Connecticut river at Lyme, and near the Delaware river in a creek in the suburbs of Philadelphia. The latter locality has long been celebrated among the cultivators of botany; it is readily accessible from Philadelphia, being but a short distance below the Navy Yard. Other species of Nelumbium are found in other countries; one, the Nelumbium speciosum, is often found figured upon the ancient tombs and monuments of Egypt. Our readers may remember the allusion made to it in the article "A visit to Kew Gardens" published in the April *Agriculturist*, page 113. It was likened to a piece of plum pudding, stuck full of hazel nuts, which very well describes the appearance of the species here illustrated. The fiber from its leaf-stalks is used for wicks to the lamps burned in the Hindoo religious services. In China and Japan, it is regarded as a sacred plant: in these countries it is largely cultivated, for food and as an offering to their idols.

We are always pleased to receive interesting specimens of this kind, and illustrate them when they are of sufficient novelty or interest. Many articles sent, are rare only in the immediate neighborhood of the person forwarding them, so that all can not be thus noticed, which will explain why some favors have been apparently overlooked.

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Troublesome Flowers—Look Out!

It sometimes happens that young cultivators, on reading of a certain flower, or seeing it in a bouquet, forthwith order it from the florist, and set it out in their garden, knowing nothing of its size and general habits. Sometimes, too, it happens that plants with pretty flowers, are so very rampant in growth, that they spread over our beds rapidly, and thus become a nuisance. A friend of ours relates, in illustration, a story of a neighbor who was much pleased with the flower of the St. Johnswort, (Hypericum *perforatum*) which he saw for the first time in the garden of a citizen. Having procured seed and grown the flower, he exhibited it with much satisfaction to his visitors, and when naming it, he was particular to emphasize the prefix thus, *Saint* Johnswort. The next year it had made its way out of the garden, and showed its yellow face here and there in the adjoining pasture. He began to doubt the saintly qualities of the plant, and in reply to one asking its name he replied, simply, "Johnswort." The following year it had overrun a large area and established itself as a complete nuisance, and when the now vexed cultivator was asked "What is it?" "That *infernal* Johnswort" was the answer.

It would be well for young gardeners to inquire fully about the habits of new plants, before introducing them to their grounds. A few that we now recall as having been troublesome to us, are these:

Antirrhinum linaria, commonly called "Butter and Eggs." It is intrinsically a pretty flower, but if once spread over a garden it becomes as troublesome as quack grass.

Coronilla varia has quite handsome flowers, in heads like clover, but the roots—oh! how they run.

Calystegia pubescens, introduced only a few years ago, we think from Japan, and highly lauded by Mr. Downing and others, but is now little better than a garden pest. Its fine, double rose-colored flowers are indeed as beautiful as its early admirers declared, but the roots spread everywhere. For this plant, we have tried setting the roots in a tight box or pot and then plunging it in the garden border, keeping watch lest the roots creep over the rim. So managed, it makes a very desirable plant.

Naming Flowers.

At this season of the year we are in almost daily receipt of flowers for which a name is wanted. With many of them a glance is sufficient, while others are not so easily determined. It always affords us pleasure to reply to those sending them, and we should do so more frequently were the descriptions accompanying the flowers more complete, or the specimens themselves more perfect. Will those sending such flowers or plants observe these few directions.

1. Let the specimens be as complete as may be—the entire flower if single, with as much of the flower-stalk as possible, and the whole spike, if growing in that form. The flower should be spread out as carefully as may be, and pressed between the leaves of unsized paper before sending.

Enclose also, a few of the leaves, with leaf stalk attached, taken from both the lower and upper part of the plant, and mention any peculiarity of the remaining foliage.

3. Give the hight of the plant, time of flowering, general habit—that is, whether the flowers are single or in clusters, upon the extremity of a single stalk, or upon the branches of a bush-like growth.

4. State in addition, whether the plant grows wild, or is cultivated, and the probabilities of its being a native of this country. Is it annual or perennial, succulent, (soft or juicy stemmed) herbaceous, (hard stemmed, but not woody,) or woody, and is it found growing upon dry or wet land, in the open fields or woods.

Descriptions like these will usually help to classify a new plant at once, and we can readily turn to a botanical description of it. These remarks are suggested, in part, by a specimen of a purple flower received from H. La Fetra, Clinton Co., O. From the imperfect specimen, we judge it belongs to the Orchid family. It could be more easily determined, if the particulars noted above were furnished.

Beautiful and True.—Well has a forcible writer said: "Flowers are not trifles, as one might know from the pains God has taken with them everywhere; not one unfinished, not one bearing the marks of brush or pencil. Fringing the eternal borders of mountain-winters, gracing the pulseless breast of the old grey granite, everywhere they are harmonizing. Murderers do not ordinarily wear roses in their button-holes. Villians seldom train vines over cottage-doors." And another adds: "Flowers are for the young and for the old, for the grave and the gay, for the living and the dead, for all but the guilty, and for them when they are penitent."

A Flower-Beggar.

Mr. Editor:—I'm in distress. For several years, I have been annoyed with flower-beggars. If these people were very poor, and could not have gardens of their own, the case would be altered; but generally, they have land enough, and health enough, and time enough, but they are too abominably lazy to work. During the great rose-period, June and July, they beset me in droves, day after day. They wander through my garden, exclaiming, Oh! what a fine rose, that white one. See that pink, that crimson, that yellow, and those other roses; please Sir, give me a boquet of them, you have so many. If I fill their hands with flowers, and then ask them why they don't have gardens of their own, they blunder out something like this: "Oh, I haven't the time, or don't know how;—what lots of fine things you have got!"

Now, Sir, can't you help me to rid my garden of these pests? In Spring and Fall, I often give them roots and seeds to help them along, but they hardly thank me: they plainly hint that they would like to have me go and set them out and take care of them also! Lately, I lectured a young man about this thing—adding some choice plants to enforce it—and he promised, quite languidly, to try and do better. As he turned to go away, I said: "Friend, do you take the *American Agriculturist*, or any other good horticultural paper?" "No." Then I replied: "Hum, I thought so." Yours in disgust, Horticola.

[Have patience Horticola. Though it is annoying in the extreme to be so pestered, there is yet the comfort of the compliment thus paid to your taste and skill. Moreover, this admiration of flowers is the first symptom of the contagion of improvement, communicated by your example. If you continue to inoculate your neighbors with occasional presents of bouquets, depend on it, some day you'll see the infection—no, the *affection*—breaking out all over their gardens and door yards; first, perhaps, in a few tuberculous crocuses, or lilies, etc., but finally coming to full development in profuse efflorescence of annuals, perennials, and it may even take the aggravated form of shrubs, trees, and landscape gardening. We have known such cases. Meantime, continue to apply the "*Agriculturist*" as a stimulant to them and an emollient in your own case, and report progress next season, or sooner if you find any *change*.—Ed.]

A Bed of Ivy.

In climates where the evergreen Ivy will flourish out of doors, its appropriate place is on walls, or clambering up the trunks of old trees, etc. But must we give it up in colder climates? Not altogether. Train it on the ground, if not up in the air. Choose any suitable portion of the pleasure grounds—if in the shade, it will be all the better, as the leaves are apt to be scorched in the sun—cut out circular or other fancy shaped beds, and plant them with roots of Ivy. The gold-striped, silver-striped, and the common English, and the Irish Giant varieties may be planted together or in strips, and so trained as soon to cover the beds completely. The branches should be kept within the boundaries of the beds by pegging down, and by clipping. At the North, such beds will need protecting in Winter by six inches or more of straw, or by evergreen boughs laid over them.

We have known persons at the far North complain of poor success with rhododendrons, hollies, laurels, etc.; let us propose to them to fill their failing beds with plants of Ivy, covering them in Winter with several inches of forest leaves. Lay a few stakes or a little brush over them, to keep them from blowing away. We will warrant such a bed to give as much satisfaction as the finest collection of flowers.

Native versus Foreign Grapes.

The question is frequently asked us: "Why all this ado about raising native grapes, when there are foreign varieties already tested, and proved to be of the very finest quality! The native grapes, with hardly an exception, are poor things, fit only for slovens and coarse grained people. Why not take the delicate and refined grapes which Europe offers us?"

And then, to enforce this appeal, we are occasionally shown a bunch of Black Hamburg, or Sweet Water, or Royal Muscadine, which has been grown in the open air, and the question is put again in a sort of imperious tone, Why not plant these in preference to your coarse, foxy natives?

To all of which we humbly reply, that the facts are not as our questioner assumes. Under favorable circumstances, a foreign grape may succeed in our climate for a few years—say two, three, or five—but after that, and even before, it is liable to be destroyed by mildew or other diseases. But a native grape will, with fair treatment, flourish fifty or a hundred years in full health. Most foreign grapes, too, are tender, and need protection from the frosts of Winter. A good way to convince any one about this matter, is to show him two lots of vines, standing side by side, the one native the other foreign, and he will generally find the foliage of the first bright and healthy, while that of the latter is yellow, crumpled and falling off, and the fruit cracked or covered with mold.

And here, we are reminded of the inquiry of another correspondent, viz.: whether, if cuttings were taken from foreign vines which have been long growing in this country, and so become acclimated, they would not be as hardy and healthy as natives?

Our friend must be referred to the simple fact that, as a general rule, all vines of foreign extraction, if grown in the open air of this country soon become the prey of mildew. They may hold out a while, but soon succumb: they can not be relied on. So that you can not get healthy vines to start with, and if you did, you can not change their constitution.

It is the opinion of some, that mildew is itself a plant, growing upon the vine, the roots penetrating the canes, absorbing their vitality, and preventing their healthy action. So long as this parasite can be kept off, the foreign kinds will do tolerably well. Native Americans have so firm bark and wood that the mildew can not grow as well upon them.

But one word more with our first inquirer: You misstate the case, when you say that our native grapes are coarse and unfit for refined mouths to eat. This may have been partly true many years ago, but it is not now. The Diana, Delaware, Rebecca, Isabella, Catawba, etc., when well grown and fully ripened, suffer nothing in comparison with an equal number of European grapes. And we are likely to improve even upon these. So that now there is no need of trying to grow the uncertain and sickly foreign kinds.

We could wish that every gardener would plant a few seeds annually, of his best grapes, and so have a race of new sorts continually coming forward. Out of them all, we should get some important additions to our stock of superior grapes. One good native, like the Delaware, would be worth fifty of the green, milky, and delicate exotics. The time is not far distant, we confidently believe, when it may be said of our northern hill-sides:

> "The vine, too, here her curling tendrils shoots,
> Hangs out her clusters glowing to the South,
> And scarcely wishes for a warmer sky."

Summer Pruning the Grape.

The question is sometimes asked: Why prune vines at all? Why not let them ramble over fences and trees like wild vines? Well, you may do so, if you want wild grapes, and if you like to climb into trees to get them. But if you wish to keep your vines within reach, and if you wish them to bear fruit on their lower branches, you must prune them.

As to summer-pruning a word or two: Fall or Winter pruning tends to excite vigorous and rampant growth in the canes which are left. The trellis soon becomes covered with lusty young canes and a thick mass of leaves; the foliage is excessive. Every vine grower must have felt the absurdity of producing such an over-growth of wood in Summer, just for the fun of cutting it off in the Fall. Can't we avoid this waste of wood, and this rude hacking of the vine? Summer pruning, judiciously applied, will contribute to this result.

The tendency of the vine, as with all fruit-bearing trees, is to send the sap with greatest force to the topmost buds, leaving the lower buds to become weaker, year after year. If we pinch off these upper shoots in early Summer—say when they have made two or three feet of growth—leaving only four buds, it will check this excessive growth at the extremities, and throw more vigor into the lower branches. These top shoots will push again, and will need a second and perhaps a third pinching. They must, however, be allowed to gain a leaf or two between each pinching; otherwise the check will be too severe. If the lower shoots are not pinched in at all, or but slightly, they will gain strength, and thus the force and fruit of the vine will become quite equally distributed. There will also be less rampant wood to be cut off in the winter pruning.

Moreover, as every one knows, the ripening of the fruit and the healthy growth of the lower branches depend on the proper return-flow of elaborated sap from the extremities. If, by reason of undue moisture in the soil, or of untimely rains and long continued damp and cloudy weather, the production of wood is unduly prolonged, the fruit clusters will be robbed of their necessary food; the berries will not mature and ripen well. Here, let the hand of art see what it can do. Let it check that excessive wood growth, by nipping off the ends of the watery branches. This will send back the sap to the clusters and to the fruit-buds for next year. It will cause the berries to mature earlier, and uniformly in all parts of the vine.

Of course, all suckers springing up around the trunk of the vine should be pulled off as they appear. All superfluous shoots pushing out between the fruit bearing canes, or among the canes designed for next year's fruit bearers, should be resolutely pulled off. Only one fruit bearing shoot should be allowed to grow from a single joint. No fruit spur should be suffered to bear more than two clusters—some say not more than one. The fruit should be picked off just in proportion to the thinning out of the branches.

Yet, we must say, in conclusion, that summer-pruning is often done with too severe a hand. "What is worth doing at all," say some beginners, "is worth doing well;" and so they cut and slash away without mercy. Off go long shoots, hacked within a few inches of the clusters, and down fall the leaves in showers.—"So as to let the light and air in," say the zealous vine dressers. Rather than this rude treatment, we would say, let the vines alone. No one can have watched his vines for many years, without seeing that his largest clusters grow on his most vigorous canes. The practice of stumping off the fruit branches within a few inches of the clusters may answer on foreign vines in graperies, but not on the robust natives. Three leaves, at least, should be retained beyond the clusters. Nip off the ends of rampant canes, but do not chop them near their base. Prune in Summer, but do it with moderation and discretion.

For the American Agriculturist.

Colloquy about Fruit Stealing.

Father.—So, you say my oldest son, John, is a promising candidate for the State Prison? and that, simply because he took a few pears and grapes from your garden.

Gardener.—Yes, I said so, and I'll stand by it. In stealing, he showed that he had no true moral principle, and little regard for my rights and feelings as a neighbor. Such a boy isn't safe if running at large, and ought to be locked up. If occasion offered, why wouldn't he slip his hand into a merchant's money-drawer, and plunder its contents?

Father.—Be careful, Sir, what you insinuate! John is as smart and as respectable as any of my neighbors' sons. I don't believe that taking a basket of fruit will destroy his standing in society. You're rather puritanical in your notions.

Gardener.—I wish Sir, that he *might* be respectable, but his conduct of late has injured him. His education must have been neglected. I'm afraid his father seldom taught him the Savior's rule, "Whatsoever ye would that men should do unto you, do ye even so to them."

Father.—Look here, Sir, don't be so wonderfully precise. You bear down too hard on me and John. He was only coming cross-lots, one day, and happening to see your grapes were ripe, he thought he might as well fill his pockets, seeing there were so many. I believe, too, he went over by night with some other boys, just for the fun of it, and got a hat full of Seckel pears; you had enough more, didn't you?

Gardener.—Such cases *happen* too often. Suppose your son just happened to see the merchant's till open, and thought he might take a handful, as there was a plenty, what would the merchant happen to do with John?

Father.—But hooking fruit isn't as bad as stealing money.

Gardener.—"Yes Sir, the law may not punish it as severely, yet it is as wicked and as base. Nowadays, the products of a garden and orchard are more valuable than they were formerly. They are more various, rare and costly. Now, if I lay out from fifty to a hundred dollars to stock my grounds with fine fruit for my family and friends, have I not as much right to that property as to any other, and ought not my rights to be respected and guarded? And more than this, the loss of money, vexatious as it may be, is less difficult to bear, than to have fruits stolen, upon which one's care has been bestowed perhaps for years. The disappointment is not measured by the mere market value of such articles.

Parents are much to blame for the loose morality which they teach their children on this subject. And our legislators are to blame for not passing more stringent laws against fruit stealing. Many years ago, an association was formed in Salem, Mass., "for the detection and punishment of trespassers on gardens, fields and orchards."

The members pledged to each other their aid in ferreting out and prosecuting offenders, and they offered rewards for all information concerning thieves. They published, at their discretion, the names of convicted offenders. And what, think you, was the result? For the first year, only one garden belonging to the members of the association was molested. Next year, it was reported that "the evil had almost entirely ceased" in that vicinity. Soon, the towns of Dorchester, Roxbury and Quincy, followed the example, and with like good effects.

I wish that every town in every State had such associations. The "smart and respectable" son John would soon be trapped, or he and his father would have to leave for parts unknown. The public morals would improve, and horticulture would receive a new impulse. Honestus.

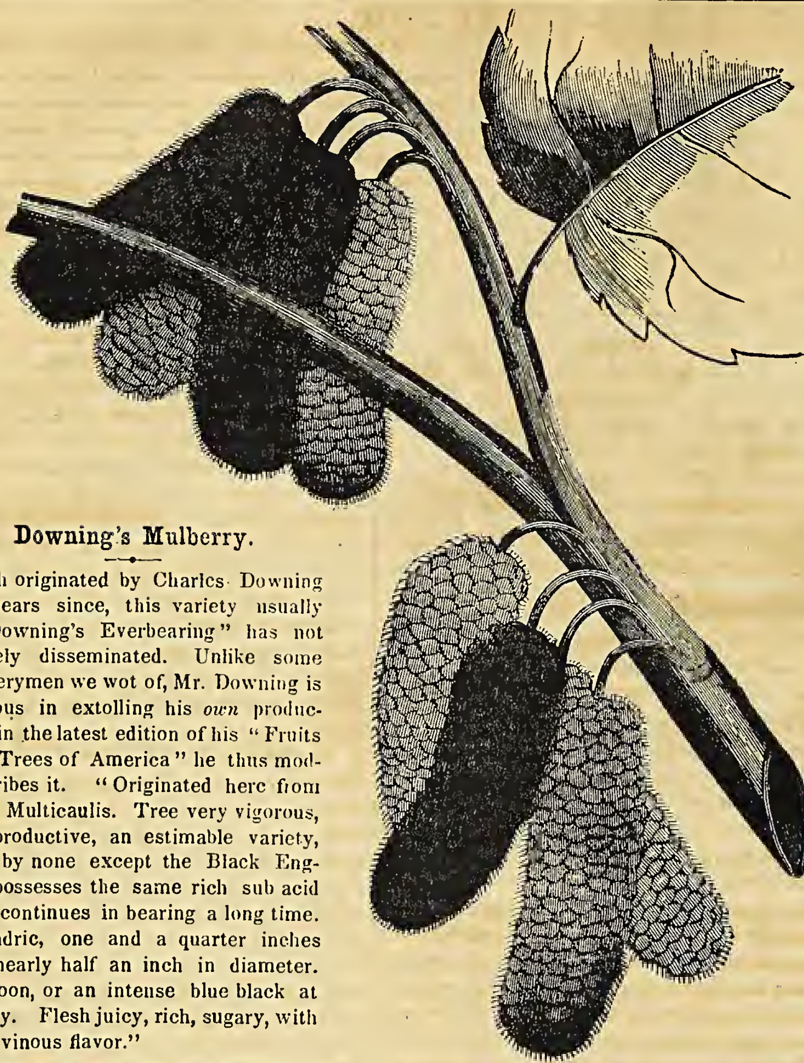
A Law to protect Fruit, etc.

The following act was passed by the Pennsylvania Legislature, at their late session, and has been approved by the Governor. It is of importance to farmers and gardeners:

Sec. 1. That the willful taking and carrying away of fruit, vegetables, plants, fruit or ornamental trees, vines or shrubs, in the counties of Huntingdon, Washington, Allegheny, Berks, Lancaster, Lycoming and Delaware, whether attached to the soil or not, shall be deemed, and the same is hereby declared a misdemeanor, and the offender may be prosecuted and punished as such under the laws of this Commonwealth, and on conviction thereof in the Courts of Quarter Sessions of said counties, shall be fined, not exceeding fifty dollars, and imprisoned not exceeding sixty days; such fine or penalty to be appropriated as provided in the second section of this act.

Sec. 2. That any person or persons who shall willfully enter, or break down, through or over any orchard, garden or yard-fence, hot-bed, or green-house, or who shall wrongfully club, stone, cut, break, bark, or otherwise mutilate or damage any nut, fruit or ornamental tree, shrub, bush, plant or vine, trellis, arbor, hot-bed, hot or green-house, or who shall willfully trespass upon, walk over, beat down, trample or in anywise injure any grain, grass, vines, vegetables, or other growing crop, shall, and may, on conviction thereof, before any Alderman or Justice of the Peace, or in any Court of law in said county, have judgment against him, her, or them, in a sum not less than five, nor more than one hundred dollars, with costs of suit, one-half the damage or penalty to go to the use of the informer, the other half of the damage or penalty to the occupant or owner of the premises on which the said trespass shall, or may be committed; and in default of payment of said fine or judgment with costs of suit, the party convicted may, and shall be committed to the jail of said county, for not less than twenty, nor more than sixty days; said complaint or action to be in the name of the Commonwealth, and the testimony of the owner or occupant of the premises shall be admitted as evidence to prove the trespass and damage sustained: *Provided*, That when the owner of the premises shall become the informant, then one-half of the penalty shall be appropriated to the school fund of the district in which the trespass was committed.

Remarks.—This is a partial step in the right direction. We do not understand why the law is confined to a few counties. Do these alone raise fruit? or is no other section infested with fruit stealers? We cannot think either supposition correct. Neither can such felony be more criminal in that than in any other portion of the State. Again, it seems hardly equitable to limit the amount to be paid to the injured party to half the fine imposed, unless the infliction of at least double damages be certain. The man who is at the pains and expense of introducing and maintaining such desirable improvements as are named in Sec. 2, should receive the most ample protection. While the sheep-killing dogs are being looked after, will our legislators please attend properly to fruit-thieving boys—full grown or otherwise—let them also be duly "collared" and registered in some appropriate "public institution," to gather the fruit they richly deserve.



Downing's Mulberry.

Although originated by Charles Downing some 15 years since, this variety usually called "Downing's Everbearing" has not been widely disseminated. Unlike some other nurserymen we wot of, Mr. Downing is very cautious in extolling his *own* productions, and in the latest edition of his "Fruits and Fruit Trees of America" he thus modestly describes it. "Originated here from seed of the Multicaulis. Tree very vigorous, and very productive, an estimable variety, surpassed by none except the Black English, and possesses the same rich sub acid flavor. It continues in bearing a long time. Fruit cylindric, one and a quarter inches long, and nearly half an inch in diameter. Color, maroon, or an intense blue black at full maturity. Flesh juicy, rich, sugary, with a sprightly vinous flavor."

A lady who has cultivated this fruit for several years writes to the "Rural New-Yorker," from which we borrow the above cut...."I have never before known a fruit that gave such universal delight, suiting all palates, and equally excellent with cream and sugar for the table, or freshly gathered from the tree to eat from the hand. In puddings they are very good, in pies unsurpassable...The trees are picturesque, hardy and rapid growers. They give fruit early, which improves in quality and size as the trees advance in age, and never fail of yielding a profuse crop for more than two months of the season when such fruit is most wanted."

The cut shows the fruit near two inches in length, or much longer than Downing describes it, but we are assured that in favorable situations—a rich, deep and rather sandy soil—and under good culture, the fruit reaches the size here represented. It begins to ripen at the close of the strawberry season, and shows fruit in all stages of growth. Besides making a palatable dish of sauce, or a fine pie in its ripening season, the berries can be put in cans, or bottled and kept as other fruit.

The trees are quite ornamental, with their dark green and very large leaves, forming handsome objects upon the lawn. Unfortunately they have not been cultivated to much extent except by a few nurserymen, foremost among whom is Dr. Grant, and are still held at a high price—$1.50 to $3.00 each, we believe. Perhaps unpleasant recollections of the "multicaulis fever" have created an unjust prejudice against the mulberry. So palatable and wholesome a fruit should be more generally cultivated, particularly when borne on a tree of desirable shading qualities. Were the excellence of the berries generally known, they would be in demand for marketing—as it is, we have not seen them offered for sale. The trees can be multiplied by grafting, or budding them upon the common white mulberry, but can not be produced true to kind from seed, although new seedlings of value may be obtained.

Kansas Correspondence.

COMPLAINTS AGAINST EASTERN NURSERYMEN.

To the Editor of the American Agriculturist:

I have just received a lot of trees from an Eastern nursery. Many of the apple trees have bunches or wart-like substances on the roots, varying in size from a walnut upwards. These are the first I have ever seen, and I wish to know the cause, the future effect upon the trees, and what will cure them. And further, can you tell us of a nursery from which we can get such things as are asked for. The orders sent from this place to ———, amounted to $1,500, and the returns were anything but satisfactory. For Apples, instead of Winesap, Limber Twig, Yellow Bellefleur, etc., we got R. I. Greening, Baldwin, Northern Spy, Rambo, etc., condemned by Western pomologists. For Catawissa and Allen's Raspberry, the Red Antwerp was sent us. We sent for the Duke Cherries, and got Bigarreaus, not but that the latter are better, for many purposes, but when one orders a specific variety, he wishes to obtain it. For Wilson's Albany, Hovey's, Longworth's and other Strawberries, varieties were sent us which were almost unknown, and wholly unfit for garden or field culture. The same may be said of Peaches, Pears and Plums, a Peach Plum being sent out instead of a Green Gage which had been ordered.

Now, Mr. Editor, if I order a thing and pay for it I want that thing notwithstanding something else may be equally as good. If I send for a particular fruit tree it is because I wish for that variety, and think I can tell what will suit my palate and our climate, better than the seaboard, or even Lake-girt nurserymen.

Nemaha Co., Kansas. KANSAS COMPLAINER.

REMARKS.—1. The warty excrescences may or may not do serious injury, but we should be afraid of them, and unhesitatingly condemn any nurseryman sending them out. They are seldom found in a well regulated, well cared for nursery, and an honest dealer or one who regarded his reputation would not let them be seen. We know of no remedy. If such trees must be used, it is better to cut off the roots so affected, or at least pare off all the warts, if it can be done without entirely spoiling the trees. At a distant point, where it is difficult to get other trees at once, it may not be expedient to throw them away, but give them a trial. With a paring off of the warts, and a change of soil, the defect *may* not be a fatal one. You should write to the nurseryman who sent them, and his answer, if not satisfactory, should be published.

2. The large changes made in your order were an imposition, if you ordered specifically, and left no discretion with the dealer. A single substitution may sometimes be made by a nurseryman, with the best of motives and for specific good reasons; but a wholesale one, as in your case, can not be excused. No honest dealer would do it. He would fill the order as made out, getting the desired varieties of others if he did not have them, or he would hand the order over to a reliable man, or frankly return the remittance. There can be no dispute on this point. In buying trees and plants, it is always best to send only to parties you can depend upon; and also to be explicit, naming exactly what you want, or giving just so much discretion to the dealers as you are willing to allow them. We can not undertake a commission business, but in special cases, where subscribers live at remote points, and have no means of forming an opinion of the character of a dealer, we shall not object when it is especially desired, if a subscriber sends his order to our care, to be forwarded to the party named, or to some other party, in case we deem it better for the purchaser. In any such case, let the order be full and explicit; and let the authority for us to change its direction be clearly and briefly stated, so that it may involve as little care and labor on our part as possible.

3. We could name a dozen nurserymen whom we know to be reliable, but this would be unjust to many others equally reliable and every way worthy. We hope no complaints can be made against any of those who have lately advertised in the *Agriculturist*—for, some time since, we commenced rejecting advertisements from parties whom we had reason to suspect of want of integrity or want of care. Our business columns are open to the public, however, and we can not always discriminate between the good and bad. A few well authenticated cases of fraud, or unfair dealing, on the part of nurserymen or others, will always be sufficient ground for declining their advertisements, no matter what price they may offer, or what may be the pecuniary loss to ourselves. We have only space for *good* advertisements, and we mean to charge such a price as only those who have a *permanent* business and character to maintain, can afford to pay.

* * *

He that never changes any of his opinions, never corrects any of his mistakes.

Pavements under Plum Trees.

To the Editor of the American Agriculturist.

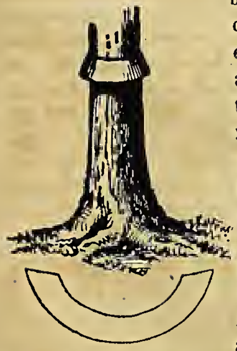
I have in my garden a very handsome plum tree, about 12 years old, which blossoms freely every year, and sets abundance of plums, but they uniformly fell off before arriving at maturity, until last season. One year ago last Spring I was advised to pave the ground under it with bricks. I did so, and the result was a full crop of fruit. Can you tell me what particular virtue there was in the bricks? Jerseyman.

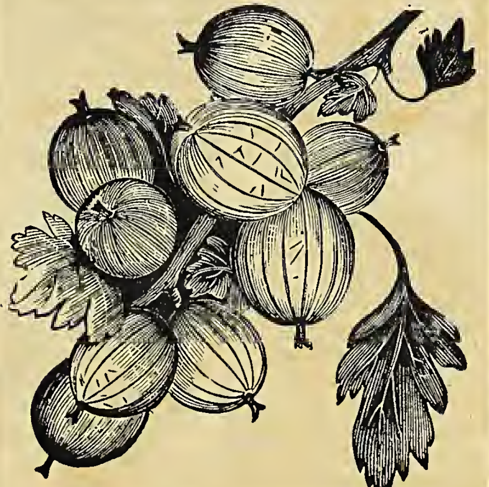
Morris Co., N. J.

Remarks.—The plums dropped off probably in consequence of injury by the curculio. A careful examination might have shown their crescent shaped mark, illustrated upon page 165 of the June *Agriculturist.* When the pavement was laid, the insects were in the soil, in their larvæ or worm like state, and the bricks prevented them from coming to the surface and changing into beetles. We have known a stone pavement, or a board flooring to have the same effect. There should be no cracks large enough to permit the small insects to escape. Where boards are used, it is well to cement between the cracks. A coat of cement (water-lime) is sometimes laid under the trees, as far as the branches extend, for the same purpose, and is quite as efficacious. The objection to this method is the partial exclusion of air and moisture from the roots, without which the tree can not long remain healthy.

A Cheap Tree Protector.

Several species of insects undergo their last change in the ground, and then make their way upward to deposit their eggs upon the branches of trees. The well known canker worm, whose nests so often disfigure the apple, cherry and elm trees, is of this description. The worms (larvæ) hatch in the Spring from eggs deposited the previous season, feed upon the leaves, making the tree look as if singed with fire, and when full grown descend to form their cocoons, and complete their transformations. In the Fall they commence emerging from the ground, and, according to Harris, continue to come out at intervals in mild weather until April, mostly, however, in the months of October and March. The females are wingless grubs, and make their way by crawling up the trunks of trees, while the winged males flutter about, and pair with them on their journey. Various means have been devised to trap them while in this stage. The accompanying illustration shows a simple arrangement used by Raymond Irish, Bristol Co., Mass. A strip of sole leather about two inches wide is wound around the trunk of the tree twice, making a collar of double the thickness of the leather, and is fastened to its place by a single nail driven through the end. A piece of thick paper—tarred sheathing paper is preferred—about six inches wide is cut to the form shown in the figure, and the hollowed edge tied around the leather on the trunk. The end of the paper overlaps two or three inches. This forms a kind of cap of conical shape, the lower edge standing out an inch or two from the tree. This cap is then covered with a mixture of tar and oil, used in such proportions as not to run, and yet remain sufficiently soft to arrest the progress of the insects. The paper will need coating several times during Fall and Spring, and they should be examined occasionally to see that the insects do not make a bridge of the bodies of their dead companions. Where no better protection can be obtained, this plan may answer a very good purpose.





Houghton's Seedling Gooseberry.

While great attention has been given to the introduction of new and improved varieties of grapes, blackberries, currants, etc., the gooseberry has been much neglected. This is owing very much to the lack of success with the English sorts and the small size and indifferent flavor of the native kinds. The gooseberry succeeds best in a cool, moist climate, hence it flourishes admirably in England. Our hot and dry Summers are unfavorable to its healthy growth; a mildew usually attacks the foreign varieties when the fruit is about half grown. In the vicinity of Paterson, N. J., some of the gardeners succeed tolerably well with a few of the English sorts, as described in our last volume, page 275, but ordinary cultivators usually fail with them. It is quite time more attention was given to the production of new American seedlings. A few such have been originated, about the earliest of which was the Houghton, illustrated above. This was raised, probably from seed of the native sorts, by Abel Houghton, of Mass., about fifteen years ago, and is thus correctly described by Cole, in his American Fruit Book. "Rather small; oval; skin thin; reddish brown; flesh very fine, tender, sweet and superior, particularly for the dessert. A prodigious grower and great bearer. Hardy; the only kind (at that time) free from mildew. Habits like Crown Bob. The best kind for general culture." Since this variety was originated, one or two new seedlings have been produced which give as good promise as the Houghton. They are all of very easy culture, and can be propagated rapidly by layering the branches.

Our Native Spruces.

A correspondent asks, if there are, indeed, three varieties of Native Spruce, viz.: the Black, Red and White?

We reply that the Hemlock should have been included in your enumeration, for it is a veritable Spruce. But to your question: Some botanists make a distinction between the red and black, admitting, however, that the difference is so slight as hardly to be worth making. Dr. Gray, of Cambridge, says: "Probably the red, white and black spruces are forms of one species." Downing says: "The black, or double spruce, sometimes called also the red spruce, is very common at the north," etc. The White he considers quite distinct. Loudon speaks of the three as distinct, and goes on to describe them at length. (See his Encyc. of Gardening, p. 1170.) The seeds and cones of the red and black are so nearly alike, that a difference is hardly discernible. Mention is made in some books, also, of "the Yellow American Spruce." In our own view, the black, red, and yellow are the same variety, modified by difference of soil, latitude and exposure. But the White Spruce is plainly distinct. Its foliage is silvery, greyish, like the common Juniper, and it surprises us that the difference is not apparent to every eye.

Evergreen Trees from Seed.

Seeds of evergreen trees, as purchased in a dry state at the seed stores, do not germinate freely. Nature sows them soon after they are ripe, covers them lightly with the falling foliage, where they are partially shaded after vegetating, which is not always the first season. Follow these hints as near as may be, sowing the seed, or putting it in boxes of earth as soon as ripe, in the Fall. If dry seed is purchased in the Spring, soak for twelve hours in tepid water before sowing, cover lightly with scrapings from the woods, or with muck, and shade from the hot sun when up. If they do not vegetate during the Spring, pull the weeds in the rows and leave for another year. A hot-bed, propagating house, or prepared frame covered with glass and under entire control, are better places to start them in. After the first season there is little difficulty in rearing them. In ordinary cases, it is preferable to purchase young trees from those who understand rearing them.

Working the Soil around Fruit Trees.

This is beneficial if properly done, otherwise not. The careless gardener strikes his sharp spade sheer down among the roots, cutting off the fibers, and doing vastly more hurt than good. If the roots near the top of the ground are cut off, other roots are caused to strike down into the cold subsoil. Hence come late, succulent growths of branches, which are sure to be winter killed. Instead of this rough treatment, keep the surface loose with a hoe, and mulch it in Winter with coarse manure.

Coal Ashes for Walks.

Probably the very best way to make a walk for the garden or pleasure ground, is to excavate the soil one foot deep, fill up with small cobble-stones or broken bricks and stones, cover with a layer of coarse gravel, and finish off with a coat of fine gravel, rounding over the same in the middle, and rolling it hard with an iron or stone roller.

But in some places, good gravel is scarce, or difficult to be got at. As a substitute for this, we would recommend coal ashes. Make the usual solid foundation of pounded stones, then spread on the ashes, finishing off with a thin layer of fine gravel or sand, giving the whole a thorough rolling. These ashes are abundant everywhere, are so cheap that they can often be had for the carting away, they pack well on a walk, sometimes becoming as solid as stone, they wash on a side hill walk much less than common grav el or sand, they are seldom injured by frost, and last, but not least, weeds will seldom grow through them or upon them.

Usefulness of Soot.

This article is often wasted, being thrown into the ash-heap, or dumped on the ground at the back-door, and no use made of it. Both science and experience show that it is a valuable manure. If used as a top-dressing to grass, it produces a marked effect. When sown broadcast, some of its ammonia becomes volatilized, and is wasted in the atmosphere. Therefore, it should be mixed with water, and applied as liquid manure. Twelve quarts of soot to a hogshead of water make a powerful fertilizer. It may be applied to peas, asparagus, strawberries, raspberries, and to nearly all growing crops.

If farmers and gardeners more generally considered that all fertilizers are more useful, when first reduced to a liquid state, they would take the trouble to bring various manures into this condition before applying them. "They do these things better in Spain,"—certainly they do in England.

Inexpensive Household Ornaments....V.

PRESERVING FLOWERS.

Flowers are always welcome embellishments of the dwelling. Many, however, for want of proper conveniences, or of time for their care, must forego the pleasures of the conservatory or the flower stand. To such, and to all lovers of the beautiful, the following directions for preserving flowers in their natural forms and colors will be of interest. We found an account of the method of preparing them translated from a foreign journal, in the Gardener's Monthly. We have not tried the process, but it appears feasible, and is at least worth an experiment.

Procure a quantity of fine sand, and wash it until all the soluble particles are gone, and the water runs from it quite clear. Then spread the sand upon a clean surface, and expose it to the sun or the fire, until perfectly dry. Next pass it through a fine sieve to remove all dusty particles which may have remained after the washing, after which use a coarser sieve to get rid of too large grains. When that is done, your sand should be a mass of fine particles of nearly equal size, as it is for instance in the so called silver sand, used for writing. Keep the sand in a very dry, also if possible, in a warm place, that no vitalizing quality may remain in it.

Now for the flowers—cut them in a fully developed state, taking care that they are neither wet nor moist by dew, rain, etc. If you can not obtain them in any other condition, which is to be regretted, then the following troublesome proceeding will render them dry. Take one or two flowers at a time, and put them into a glass, into which pour just enough water so that the ends can stand in it; the flowers will then dry, and still suck up water enough not to fade.

Next, get a box or a pot, or anything large enough to receive your flower or flowers; pour sand enough into it that they may stand by themselves, their stems embedded in the sand. And now for that job which calls upon your whole skill and your most delicate fingering; don't be afraid though, practice renders that too a comparatively easy matter. You have to fill up the box above the level of the flowers with sand, so that the flowers are completely embedded in it. By means of a tube or a funnel, or a sieve, you can do it in such a way that every particle of the flower rests in sand, and that your filling up shall not have crumpled or displaced the smallest petal. Of course, such a thing can be done only in a very slow way by a beginner.

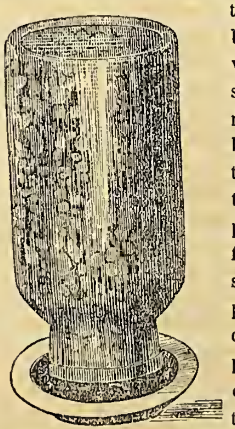
And now take care not to shake your box, else the flowers inside might get hurt. Carry it to a place both dry and warm, that all the moisture in the flower may pass into the sand, which being porous, is in turn acted upon and will let the moisture pass entirely out and be evaporated. Avoid, however, positive heat, or the colors of the flower will fade, whilst at too low a temperature the moisture in the flower will not dry quickly enough, and so rot it. The warmth should, as a general thing, never exceed 100°.

When you are sure the flowers have fully dried—a thing which very little practice in touching the box will teach you—the thing is done. Open the box, and by holding it in a slanting direction, let so much sand run out that you can lift the flower by the stem; by turning it upside down, shaking it gently, and if necessary, blowing on it, all the sand will be removed, and you have the flower in its most perfect form. It will be a little brittle, to be sure, in such a dry state as this, and therefore will require careful handling. But a few days' exposure to the atmosphere will have imparted moisture enough to the flower to make it considerably less easily broken.

You now see why we can not do with the larger grains of sand; they would press unequally, and spoil the flower, which forever retains all the marks of such pressure; nor with the dusty particles of the sand, because they, as well as the soluble particles which we have removed by washing, would adhere to the hairy and velvety parts of the flower, would never be got rid of, and would materially impair the original beauty.

Prepare the Fruit Bottles—The best Method of Preserving Fruit.

Cherries and strawberries, now in the hight of bearing, have ushered in the fruit season, to be kept up by raspberries, blackberries, peaches, plums, etc., to the end of the luscious catalogue. Thanks to recent inventions, we may prolong the enjoyment of these cheap and healthful luxuries beyond the few short months of their ripening, and rejoice in *fruits retaining almost their natural freshness*, when the plants that bore them are shivering in the winter gale, or sleeping under their snowy covering. Up to the present time we have an abundant supply of a large assortment of last year's bearing, safely kept in the manner described in the previous volume, pages 214 and 310. Before us, as we write, stands a wide mouthed pint bottle or jar, inverted in a small tin "patty-pan," with cement just covering the rim around the neck of the jar as shown in this figure. In the jar are peaches put up last August, the jar corked, the cap and cement added, and they now look as if just gathered and made ready for tea. Being in clear glass, any change can be readily noticed. Having during the year fairly tested the usefulness of glass vessels for this purpose, we shall hereafter discard tin, or metal of any kind. For many fruits and vegetables tin cans answer every purpose; and if glass or earthen-ware were not obtainable, we should use tin for sweet fruits as formerly; but the comparative cheapness of glass, the entire absence of injury to the articles by corrosion of the surface, and the readiness with which the condition of the preserves is ascertained, are paramount advantages. No particular form of jar is essential—any bottle with a neck wide enough to receive the fruit will answer. We gave preference to those having a flange about the mouth, and a shoulder in the neck for the cork to rest against, because of their convenience. The addition of the small pan upon the top for holding the cement, and relieving the pressure upon the cork, makes the shouldered neck unnecessary.



The essential points to be observed in preserving in this manner are: 1*st*, that the articles be entirely fresh. With soft pulpy fruits, as strawberries, this is very important. Many who have been at fault here, blamed the bottles or cans, and us for recommending them. Berries purchased in the market are often from six to thirty hours gathered, or more. Fermentation advances somewhat before it can be perceived by the taste, and when once it has started, is with difficulty arrested. The good housewife sometimes introduces such fruit into confinement, without sufficient cooking—the openings are safely closed, but the "working" goes on. Carbonic gas is generated, "pop" go the corks, and out run the frothing syrup and the housewife's hopes together. Fruits with a firm skin give less difficulty, because their decay does not commence so early.

2*d*. Sufficient cooking is needed to expel the air contained in the fruit, and to counteract the change which exposure to the atmosphere has produced. The liquid albumen is made solid by boiling, and in this state is not easily fermented. Green corn among vegetables, require the longest boiling; say two to three hours. Skin fruits, as plums, peaches, etc., we have kept without cooking, except that obtained by pouring in the boiling syrup and sealing at once, but a previous heating *through* is preferable.

3*d*. Care must be taken to entirely exclude the air. *Fill* the bottles, raise the liquid to the boiling point, then put in the cork, and make all so tight with cement, that air can not enter. A pin hole left will as certainly spoil the fruit as though the cork were not inserted. Housekeepers should not be discouraged by one or two failures. A few trials will give the necessary practical experience, after which they will thank the *Agriculturist* for commending the fruit bottles. Now is the time to procure a supply.

SPECIAL DIRECTIONS FOR PUTTING UP FRUIT.

As a guide to new readers, of whom we have some fifteen or twenty thousand, and for convenient reference for older readers, who may not have last year's numbers at hand, we add the following special directions.

Berries. For strawberries, blackberries, and raspberries, take the clean fruit, picked while dry, avoiding washing unless really necessary. Put into a glazed vessel; one of brass will do, but is not so good as an enameled one. Pour over it a hot syrup, made of ½ lb. to 1 lb. of good white sugar to one pint water. (We have used ½, ¾, and 1 lb. of sugar with nearly equal success. A good rule is to use about as much sugar as will be required to fit the fruit for eating, remembering that rather more is required when the fruit is to be saturated through, than when it is to be eaten fresh.) A small amount of syrup will be needed to fill the interstices between the fruit, and it need not come up quite to the top at first, as the fruit will sink down into it when boiling. Carefully cook the berries in the syrup for 12 to 20 minutes, so that all shall be scalded through. Too much cooking destroys the form of the fruit, and dissipates the fine aroma. Heat it through, but do not stew it down. Have the bottles ready heated by the stove, or in water (setting them in, when it is cold, and heating it up), and pour in the fruit with the syrup. This can best be done through a wide-necked funnel, or from a pitcher, to avoid getting the syrup upon the top of the bottle, which would prevent the union of the wax with the glass—a very common error. Fill the bottles not quite to the top of the neck. Let them stand a few minutes, occasionally jarring them a little, to facilitate the escape of any air bubbles left on pouring in the fruit. This, with the partial cooling, will cause the fruit to shrink a little. Now pour in enough more syrup to fill the bottles as high as where the bottom of the cork will sink to. Carefully wipe off any chance drops of syrup that may have been carelessly left upon the neck or top of the bottle, and press in the corks. The corks should be large, and be softened in hot water, so that they will press in easily. Press the corks down upon the syrup. If any syrup oozes through, carefully wipe it all off with a towel dipped in hot water, so as to leave the glass *clean* for the wax. As soon as the water dries off, dip on the melted cement with a spoon, until the top is well covered. Pour a little of the cement into the "patty pans," turn the waxed neck into it, and add enough more cement to perfectly close the rim of the bottle neck. Remember that water or grease on the neck of the bottle will prevent the firm union of the wax. (We make a long story of these particulars, but they are essential, and easily and quickly attended to, requiring less time and trouble, than to watch the cooking in the old method of preserving.)

For Cement, the best we have found is about 1 ounce of tallow to 14 ounces of common resin. This is a cheap compound, the resin costing only 4 to 6 cents per pound at retail. We make up a dozen pounds or so at a time, and keep it on hand, melting it as often as needed.

Peaches, cherries, plums, apricots, pears, quinces, etc., may all be put up in the same manner, and with but very moderate cooking. Apples and quinces of course require paring and coring. They may be cut into pieces of any desired size and form. If in very large pieces, a little longer boiling may be needed to have them heated *through*, but not cooked soft on the outside. The pits should be removed from peaches; cherries are all the better for being first stoned, and more of them can thus be got into the bottles.

Apples may be stewed into sauce ready for the table, and then be bottled up for use, without further cooking, three, six, nine, or twelve months afterwards. We always put up a large quantity thus, at different periods of the year—in the Winter taking cans that had previously been used for the same purpose or for other fruits.

Any kind of *stewed sauce* may be seasoned, then bottled and sealed, and be always ready for use.

Tomatoes we put up largely every year, and have now (in June) a fair supply, as good as if just gathered and cooked. These we skin, cut, and boil down one half, and then bottle up. Prepared in this way they are so convenient, and of so good and fresh quality, that we make no special effort to secure early new tomatoes.

Rhubarb, stewed soft, sweetened as for pies, and bottled, comes out nice and fresh in mid-winter or Spring.

Currants and gooseberries are also similarly kept, but these should be mature, if not ripe, and be well cooked and sweetened with a strong syrup.

Green peas, beans, and corn may also be kept, but they need to be thoroughly cooked before bottling, or they are liable to spoil.

We repeat in closing, that though we have made a long chapter in giving particulars, the process of putting up in bottles and cans, we find to be less trouble and labor, than the old fashioned mode of "preserving" in sugar, while less sugar is required, and a sweetmeat or sauce is thus obtained, far superior in appearance, in taste, and especially in healthfulness.

For the American Agriculturist.

Working Butter—Practical Suggestion.

After the butter is removed from the churn, put water in the working bowl, to rinse off the buttermilk. In another dish have cold water and a linen cloth free from lint. Wring the cloth out dry, spread the butter out with the ladle and press the cloth gently on the butter and remove all the drops of moisture. Continue this process until the butter is ready for salting—keep the water clean for rinsing the cloth often. Any one trying this, will be surprised to find how much it facilitates the preparation of butter to salt.

Mrs. H. Jessup.

Chautauque Co., N. Y.

For the American Agriculturist.

Why Saleratus is Used.

But comparatively few bakers understand the chemistry of saleratus, and it is reasonable to suppose that many persons who use it less frequently are equally ignorant why they do so.

When bread is made with yeast, the fermentation that takes place, creates a gas known as carbonic acid. As this forms gradually, and in an increasing quantity, it expands or raises the dough—and this continues until the tenacity of the dough is overcome; when the gas begins to escape the sponge or dough will gradually shrink or *fall*. This gas expands still more and quicker, if heated, consequently when set in the oven, the loaf of bread becomes larger. If bread be cut, the effect of this gas may be seen in the fine, regular pores or cells. The beauty and perfectness of these cells, will depend upon the extent and completeness of the fermentation, the amount of kneading, and the tenacious quality of that part of the flour called gluten. This is the only gas that is practically made use of in raising bread, cakes, etc., and, as obtaining it by fermentation is a slow, and at times, very inconvenient process, some quicker mode has been found necessary; hence, we use saleratus, for this substance contains the same gas—carbonic acid—combined with *soda* or *potash*, and by using some other acid with it, to take the place of the carbonic acid, or by simply heating it, or any mixture which contains it, the gas escapes and thus "raises" the mixture. The gas, therefore, is all that is wanted, and to obtain it, is the only purpose for which saleratus is used.* The soda or potash remains in the mixture, and physicians generally consider it unhealthy: but "doctor's will differ." There is, comparatively, but little saleratus made from *potash*, most of it is from *soda*, and its chemical name is bi-carbonate of soda, or potash, as the case may be. That which is made from potash, supposing it to be a pure article, will contain in 91 parts, or ounces—44 ozs. of the gas, and 47 of potash. If one ounce is used, more than half remains in, and is eaten with the food in which it was placed.

That made from soda is the best to use, on one account at least; for while the same amount of gas is obtained, only about 41 per cent is left in the mixture. But, although it has this advantage, it might be unwise to buy the article—labeled "soda saleratus"—generally packed in papers and largely adulterated with common salt. Don't be deceived, therefore, by the name "*saleratus*," but purchase the "Bi carb., or Baking Soda," whenever you wish "the best the market affords."

In using saleratus—it should always, if possible, be dissolved in milk, or water. But not in hot water, or that above 100° Fah. for the heat of the water, would act the same as the heat of the oven or stove to drive off a portion of the gas.

Neither should it be dissolved in *sour* milk, for the acid of the milk, drives off the gas before it is put in with the mixture. Heat, alone, does not drive off all the gas contained in the *soda*; consequently *acids* have been used with it. With such additions, if the proper quantity is used, the whole of the gas is liberated; but that which is left in the mixture, is, perhaps, none the healthier. There is, therefore, an advantage in using *sour* milk, but the saleratus should be dissolved in a little water, and the saleratus and milk, brought together *in* the mixture. A large portion of the gas will even then escape, if not soon placed in the stove and a crust formed.

Tartaric acid, and cream of tartar (the latter containing tartaric acid) are used. Ground cream of tartar is very rarely found pure at the drug-stores; and when pure, its use only leaves so much more useless matter in the mixture, after being baked. Tartaric acid is to be prefered; if pure, it attracts moisture with great avidity—a wet spoon or knife must not come in contact with it; it requires to be kept in a dry place. [We think cream of tartar preferable to tartaric acid for general use; 1st, because the former unites less rapidly, and not fully until heat is applied, so that more of the escaping gas is thus retained within the dough; and 2d, because the double salt (New-Rochelle salt) which is formed by the union of cream of tartar and soda, is less offensive to the system than the tartrate of soda produced by tartaric acid and soda.—Ed.]

About equal portions of tartaric acid and baking soda are used, a little more of the soda than acid, by weight. They should be dissolved separately. Considering the loss of gas which usually occurs when any acid is used with saleratus, and the small amount which may not be driven off by the heat of the stove, when used alone, there can be no great advantage in using either tartaric acid or cream of tartar. Though there may be both economy and convenience in using *sour* milk. In mixtures containing molasses, bakers generally use about ¼ of an ounce saleratus to each quart of molasses. J. C.

Collecting a Debt.—"Here, take your money. But why did your master write me eighteen letters for it?" *Ans.*—"I suppose because seventeen did not bring it."

[* Soda or saleratus is very often used simply to neutralize the vegetable acids formed during fermentation. When bread dough stands too long, and gets soured, a little soda worked in will sweeten it. So, also, soda or saleratus is added to batter for griddle cakes to sweeten them, that is, to neutralize the acid. The goodness of "buckwheats" depends upon the skill of the cook in adding just enough alkali to make them sweet. If too much be added, it can be neutralized by adding a little cream of tartar. When the batter is not sufficiently light, the cakes are improved by adding both soda and cream of tartar.—Ed.]

The Editor with his Young Readers.

POUNDING IN A LESSON—A BETTER WAY.

"What are you doing Emma?" we asked the other day of a young friend, whose singular conduct excited our attention. "Learning my lesson sir," replied she. We could not help laughing, for her motions indicated any thing else than that. She was sitting half bent over near a table on which her book lay; her feet rested on the rounds of the chair; with one hand she grasped the edge of the table and with the other closed tight she was beating on her breast, while she rocked back and forth,and repeated the words from the book, over and over again, in a mumbling, half singing tone. She looked as if she might have been performing worship to some strange idol, or punishing herself for the faults she was confessing. The idea of *pounding* the words of a lesson into the memory was somewhat new, though we had seen schoolmasters accustomed to work on that principle—without much success, however.

We have seen other children make similar odd motions while trying hard to learn a lesson. The only reason we can imagine for this, is that in their earnestness, they get up an extra amount of mental steam, which has to be worked off somehow, and the head, hands, and feet are accordingly set in motion. Now, when persons *thinks deeply*, the effect is usually to make them very quiet. You may have noticed your little brother when his mind was intent on some thought, how he sat looking earnestly without moving; he appeared to see nothing around him, though his eyes were opened wider than usual; and you spoke to him several times, perhaps, before he heard. He was completely lost in thought. We have a friend who often passes acquaintances in the street without noticing them, and some have thought him either very rude, or too proud to speak to common people, when, in truth, his mind is too busy with thought, to notice outward objects—when not thus engaged, he is a most genial and social companion. For this reason, when we see a child studying as Emma was doing, we conclude there is not much thought in the matter, only a violent effort to get the words of the book in the memory, so that they can be repeated. That is, perhaps, better than no lesson, but not the best way. When you wish to gain knowledge from a book, first ascertain exactly what the words and sentences mean. Take the writer's thought, and make it your own, so that you can express it clearly in your own words. If this can not be done without help, ask an explanation from some one who understands the matter. Then, when you have the thought, get the *words* of the book, as they will usually express the idea better than yours can. By this means you will know what you are talking about, when you recite. The thought required to learn a lesson in this manner, will require all your mental force, and leave none to be expended in the pounding and mumbling process. Words committed to memory without being understood, are like nuts swallowed whole; they may rattle in the mouth but they give little pleasure and no nourishment.

AN AMUSING GAME.

Many of the games played by young people are not only silly but otherwise objectionable. It is not necessary to make hard study of amusement, but there should be enough of thought mixed with the fun to keep it from being nonsensical. We should be happy to receive descriptions of any new games of this kind. Among the games which call for ingenuity and thought, we have seen great merriment caused by the following, which may be called, "pantomime rhymes." Three, four, or more actors are chosen, who consult together and select some word, to which rhymes can readily be found. For instance, the word chosen is *ditch*. Then each performer must, in his turn, act out a word rhyming with *ditch*. The first player may come in and display his pocket book, count his money, and try to show that he is *rich*. The second can amuse himself and the company by taking pennies, and showing them how to *pitch*. The third can perform the motions made in consequence of the *itch*, and another can represent a *witch*, etc. This is all to be done by the actors without speaking, while the company endeavor to guess the word selected, and the rhymes that have been acted. When this is done, another word is taken, and the rhymes performed as before. The interest of the game depends upon the words selected, and the ingenuity of the players in acting out their parts.

THE BENEVOLENT CROW.
(*Original sketch for the American Agriculturist.*)

CHEAP GENEROSITY.

What have we here? A crow seated on a cornstalk, ready to make a good meal from the nice plump ear before her; and a very intelligent and accomplished, though humble appearing squirrel looking on very wistfully. See here, Mr. Artist, in what country do you find squirrels that walk on two legs and carry baskets, and hold conversations with crows? Ah! yes, we understand; these surprising animals belong to the same region where Professor Frog and his music pupils live——out in dreamland. Though we have not much faith in dreams, we know such visions as this usually mean something. Old Æsop was a famous dreamer of this sort. He heard birds, animals, plants and objects of all kinds converse, and there is much sound sense in their talk as reported by him. Suppose we listen a moment, and let the crow and the squirrel in the picture tell their own story.

Squirrel.—Fine morning this, Mrs. Crow.

Crow.—Somewhat warm for your fur jacket and tippet I should think.

Squirrel.—Rather, it is true, particularly as I have to work so hard.

Crow.—Providing for the family, eh?

Squirrel.—Yes, the four little ones, with their mother, take a world of feeding.

Crow.—Can I assist you in any way?

Squirrel.—If you will please to fill my basket with corn, it will help me much; my teeth are getting poor; I have nearly worn them out upon the hard butternut shells.

Crow.—I shall do so with pleasure. It makes me happy to give to the deserving: indeed I think generosity one of the highest virtures, and I am always willing to give where I can conscientiously.

There! did you ever hear greater impudence? That thieving bird setting herself up for virtue, and prating of generosity! Goodness must be cheap in dream-land if this is a specimen. The crow is quite willing to bestow liberally of what costs her nothing, and to get a reputation for benevolence by giving away a portion of her stealings. "Softly there" whispers our artist "the crow has lived so long near the dwellings of men, her good qualities have been corrupted." That sounds harsh, does it not? but when we observe how hard it is for many persons to do a favor when it costs them something, and how ready they are to be generous with other people's money, we think he may be at least half right. Is there any of this *crow generosity* among our girls and boys? Is it easy for you to be liberal if father will find the pennies, but very hard, when you must get them by your own efforts? The truly noble are those who practice self denial for the good of others——that we take to be the moral of this picture fable.

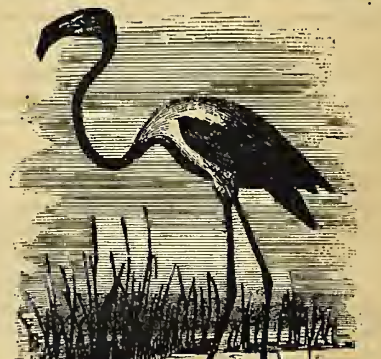
A GREAT AFFLICTION.

A friend of ours, whom we will call John, was noted, when a boy, for his love of music—he is pretty full of it to this day. He was an accomplished whistler, and from morning until night, you might hear him merrily pouring out his happy feelings in strain after strain of melody. Songs and hymns, operas and jigs, everything that he had ever heard sung or played, was brought out in a manner that the birds might envy. One day, in haying time, he was passing from a field just finished, to spread the hay in an adjoining lot. He was whistling away as if his life depended on it, when, just as he mounted the fence, a humble-bee, whose nest was near, took a "bee-line" for his face, and stung him upon the upper lip. Although the pain was pretty sharp, he did not mind it much, but went on with his work. Shortly after, one of the men at work pitching off a load of hay, heard John enter the barn, sobbing and crying bitterly. "Why, John, what's the matter?" he inquired.

"I—I—can't—wh—wh—whistle!" sobbed out John. The pain he could endure, but when the swelling of his lip prevented his whistling, it was more than he could bear, and he was only comforted by the assurance that his lip would soon be all right again. It may appear a trifling thing for a boy to feel sad about, but we think it would not be a small matter to lose the power of whistling. Somehow, work goes easier when it can be performed to the sound of music, and we know that when troublesome thoughts come into the mind, they can often be blown out with a vigorous whistle. Our apparatus for this work is not as much used as formerly, but even now it is often a real luxury to pipe out a lively tune.

THE FLAMINGO.

Not a very graceful bird, surely, but his beautiful plumage in some degree makes up for his awkward form. What can be the design in giving him such long, slim legs and such a reach of neck. It was for some special purpose that he has been furnished in this manner, for the Creator makes no mistakes, and adapts every thing to its proper use. Looking at the feet, you observe they are webbed, like those of a duck or goose, which shows him to be a water fowl. He does not swim, however, but wades, and the form of the foot prevents his sinking deep in the soft mud. Now you can see the use of his long legs. They are like stilts to enable him to pass readily through the water, and being up so high, he can also discover fish at some distance, and approach them unobserved. Of course he should have a neck to match the legs, otherwise he must kneel down to eat, and while he was taking this position, the fish would dart out of reach. Perhaps the most curious part of this bird is his bill. It appears as if broken or badly bent. This, however, is an admirable contrivance for his convenience. When securing food he bends his neck down



so low, that the bill is almost inverted in the water, and the crooked upper half of it then forms a spoon with which he scoops up his meals.

There are five or six species of these birds inhabiting the warmer parts of the globe. They are often found in considerable flocks near the sea shore and in marshes. When they are feeding, one stands as sentinel, and gives notice of approaching danger by a trumpet-like noise, at which all fly away in a wedge shaped flock, in the manner of wild geese. The American Flamingo is about four feet long from the bill to the end of the toes. The wings spread about five and a half feet from tip to tip, each wing being about sixteen inches long. The feathers are of a bright scarlet color, the quills black, and the legs red. They are very shy, but are said to be easily tamed. Their nests and manner of setting are peculiar. A hillock of mud is raised about two feet high, two or three eggs about the size of a goose egg are laid in a hollow on the top of it, and the female sits, *standing* over it with one foot in the water. The American Flamingo is found in the West Indies, in Florida, and Alabama, but rarely north or west of these points.

HOW TO TAME BIRDS, ETC.

We never see a bird or a squirrel in a cage without unpleasant thoughts. Freedom is natural, and confinement irksome to every living creature. The lower orders of animals may not have thoughts as we do, but they have feelings and instincts which give them pleasure or pain, and an unnatural life must deprive them of enjoyment. If you are fond of pets, try and make them so tame that they will remain with you without compulsion. Almost any creature will become attached to you by kind treatment. A friend of ours relates an incident in illustration. At the Greenwich Hospital in London, where disabled and invalid naval officers and sailors are cared for, those not confined by severe illness, are at liberty to amuse themselves in any proper manner they choose. One old veteran was frequently seen to gather a handful of crumbs when leaving the dinner table, which he carried to his room. A friend accompanied him one day and witnessed a pleasing sight. He spread the crumbs upon the window sill, and then drummed pretty loudly with his fingers upon the glass. He said he was drumming his "Sparrow call." It was speedily answered by a dozen or more of these little birds, who came fearlessly and eagerly around him, and gathered up the food he had spread.

The same friend tells of a kind hearted baker in London, who used every day to scatter the crumbs left in his cart, upon his grass plot, for the birds to pick up. The sparrows soon became acquainted with him, and when he went out with his cart to distribute bread to his customers in different parts of the city, a flock of these birds hovered about him, accompanying him on his round, waiting for their daily meal.

Try such an experiment with the birds of your neighborhood. Scatter crumbs or seed somewhere near the house, in the same place every day. The little chirpers will soon find it out. Then, never frighten nor molest them, and they will soon give you their confidence. How much more pleasure this will afford than to shout them, or to confine them in cages. Try it.

A FOURTH OF JULY SPEECH.

One of our young friends writes as follows: "Mr. Editor I would like very much to make a fourth of July Speech, if I could only get an audience. Can't you set me on the editorial stump and let me have a talk with my *Agriculturist* cousins?" Yes John, step up here, take your stand on this three legged stool, hold up your head, face your audience of a hundred thousand girls and boys and out with your speech. Hear him.

"Hurrah for liberty! Three cheers for independence!! Columbia forever!!! I have a small voice, but it is full of my heart, and it shall come to you, like an electric spark falling on powder. Who is so dead that his pulse does not beat quicker on this birthday anniversary of the nation? If there be one, find him out, fill his pockets with powder and his hat with gas, tie him to a bundle of rockets, touch him off, and send him up to get a new view and an exalted idea of the glorious land he is now unworthy to inhabit. But I leave him to his fate and return to you who do exult as Americans should.

When the seed breaks forth from its prison in the early year, the Spring rejoices, and men are happy at heart; but the *fullness* of joy comes when the harvest waves over the field. The world rejoiced when, in 1776, our forefathers declared their independence. It was the young growth of Liberty. To-day we are reaping the fruits of that Spring time, and our joy overflows from swelling hearts. This country then was like a farm with here and there a field planted. There were scattered villages, full of life and promise, but few in number, and far between. What a crop has been raised from that small beginning. They had strong roots, those noble men that fastened to the soil. They were God-fearing, liberty loving men, and from those roots have sprung the blossoms and the fruit of the intelligence, the prosperity and the happiness of our day. They had to fight hard, but they were brave because they were good, and what they won we enjoy.

I hope the day of fighting with powder and ball has passed, in this country at least, and that we may always use our ammunition in fire crackers and rockets, and big guns, as we do to-day, without hurting any body, but I tell you my young friends the world's great battles are not over yet. We've worse enemies to overcome than our forefathers met on Bunker Hill, Saratoga, and Yorktown. Ignorance, selfishness, and vice are working at the foundations of our prosperity like rats gnawing off the beams of the building that shelters them. Every one of us that grows up uneducated, or a wrong-doer, or selfish, or mean, is cherishing an enemy of his country. Oh! If I could to-day bring out the biggest gun ever made, load it to the muzzle with knowledge and goodness, discharge it into the heads and hearts of these troublers of the country, is there a boy that wouldn't give a light, or a girl that wouldn't, if necessary, give me her new dress for wadding. But it can't be done in that way. We must meet these enemies, book in hand, in the school-room; we must shame them out of the land by good examples of truth-telling, of generosity and love, we must fight our battles hand to hand in our own lives, by resisting and overcoming every bad habit, and if each will overcome himself, then will all have a good time together, and be able to shout *liberty and independence forever!*"

Bravo! John. We nominate you for President in the year 1900, and hope there will be enough like you to secure your election.

A BAD CROP TO CULTIVATE.

"He's only sowing his wild oats" said a man, when told of some piece of willful mischief which his unruly son had been doing. This he counted an excuse, or at least a palliation for the offence. He appeared to think it necessary that young people should pass through several years of thoughtless, reckless misconduct, after which they would "naturally steady down, and come out all right" as he expressed it. Do you suppose he brought up his colts on that principle. Would he allow and encourage them to bite and kick, throw fences, balk in the haress, or run away with the wagon, expecting them to become good reliable horses when their "wild oats were sown?" Or would he manage his garden in that way, permitting the seeds of dock, thistles and briers to be sown there, feeling certain that, by and by, strawberries, and melons would take their places? Most assuredly not. Will our young friends remember that *wrong done, leaves a bad mark on the character.* If you "sow wild oats" in youth, they will grow up to be a curse in future years. Some one has truly said

"Sowing his wild oats"—aye! sowing them deep,
In the heart of a mother to blossom in tears,
And shadow with grief the decline of her years.

"Sowing his wild oats," to silver the head
Of the sire who watched his first pulse throb with joy,
And whose voice went to Heaven in prayer for "the boy."

"Sowing his wild oats," to spring up and choke
The flowers in the garden of a sister, whose love
Is as pure and as bright as the blue sky above.

"Sowing his wild oats." Aye! cheeks shall grow pale,
And sorrow shall wither the heart of the wife,
When manhood thus squanders the prime of his life.

"Sowing his wild oats," Death only shall reap,
With his keen sharpened scythe; the fruits will be found
In the graveyard near by, 'neath that grass-covered mound.

ABOUT THE PROBLEMS.

Our young friends must have been considerably stirred up by our inquiry if the problems were too difficult for them, and the request that they would send in a *string* of names. Their letters have come in almost by the peck. Well, the more the merrier—Do it again. The following names were received last month after the first part of the paper containing the problem matters, answers, etc., had been sent to the printer; this accounts for their non-appearance in that number.

No. 10. *Aunt Sue's Rebus.*—Read correctly by S. E. Batchelder, Andrew Hageman, F. C Adamson, "Reader at Astoria," Lottie O. Chapman, W. J. Spencer, F. E. Pearce, L. B. Camp, E. D Barker.

No. 11. *Star Puzzle.*—Solved by Henry D. Musser, Edward P. Nichols, Sarah E. Middlemiss, Frank Fargo, H. Clark (The puzzle sent is too generally known to be republished in the *Agriculturist.*)

No. 13. *Rebus.*—Correct readings received from N. H. Walworth, P. H. Freeze, S. E. Batchelder, Thomas T. Bell, Edward P. Nichols, Andrew Hageman, Frank Fargo, James O'Neil, Giles E. Stillwell, S. Hathaway, "Reader at Astoria," Albert Nye, T. B. Munson, John W. Miles, Jr., Lottie O. Chapman, Simeon Reesor, W. Jay Spencer, Angeline Fullerton. L. B. Camp, H. C. Allen, Sarah E. Middlemiss, A. J. Montagne, George B. Hedges, J. C. Brandon, Wm. Brandon, Hannah C. Bartley, Mary E. Servoss, T. H. Smith, Annie L. Smith, A. D. Neff, Jr., E. D. Barker, C. Barnhart, F. A. Saunders B. F. Wallis, David T. Osgood, D. W. Webb, Charles D. Bingham, Frank W. Lockwood, John E. Smith, James Waters, C. W. McKelsey, Joseph Clayton, J. O. Hatch, P. Cuningham, S. Scruggs, F. Flam, Jr., Francis W. Puffer, Thomas Almond, E. Hogg, E. Mead, L. W. Ross, Annie Williamson, Eliza Nichols, Arabella Nichols, G O. Farr, A. H. Edwards, D. Norton.

No. 14. *Anagrams.*—Properly arranged by James Waters, G. O. Farr, Thomas T. Bell, "A Reader at Portsmouth." (Why was the name omitted?) T. V. Munson, Jno. W. Miles, Jr., Osmond H. Jessup, Sarah E Middlemiss, Hannah C. Bartley, Mary E. Servoss, T. H. Smith, A. D. Neff, Jr., Reuben C. Richard, Wm. G. R. Kieffer, B. F. Wallis.

No. 15. *Arithmetical Problem.*—Answer 5,026 ft. Solved correctly by Sarah E. Middlemiss, Owen Strain, Reuben C. Richard, Mary E. Servoss (with a little help from "Mother,") E. Cook, "Reader at Astoria," T. V. Munson, George Elcock, Thomas F. Bell.

No. 16. *The Accountant's Puzzle.*—The meaning of this curious bill was as follows:

John Stouter,
To C. Speedy, Dr.

To 2 Iron Plows @$7	$14
1 Wooden do (one wouldn't do)	7
This deducted, leaves	7
to be paid for the one that "would do."	

Correctly answered by J. Stokes, Jas. A. Bergen, Franklin Adams, and by an anonymous correspondent who adds:

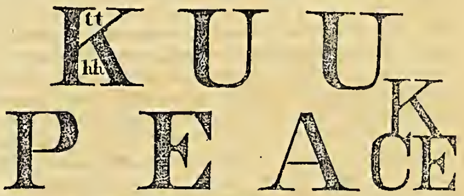
"John's plows, the lazy worthless lout,
Were too 'Stouter,' but were not *stout*—
Charlie's grass was growing seedy,
So he wrote him thus: 'can't you C? Speedy'."

No. 17. *Anagrams.*—The following are the correct transpositions.

	Ans.
Flit on cheering angel.	Florence Nightingale.
A niee cold pic.	Encyclopedia.
Comic trade.	Democratic.
Nay I repent it.	Penitentiary.
Spare him not.	Misanthrope.
Moon Starers.	Astronomers.
Golden Land.	Old England.
Nine thumps.	Punishment.

Partially answered by Wm. P. Rochenour and Nelson More.

NEW PROBLEMS.



No. 18. *Original Rebus*, contains very good advice. We think this a real puzzler, perhaps you will find it otherwise.

No. 19. *Puzzling Bill.*—Contributed by Frank Fargo.

Half All
To Ha Owel Dr.

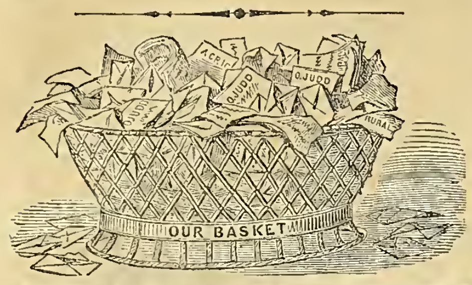
To anosafada	5s. 6d.
to getinonimom	2s. 0
	7s. 6d.

What sense can you make of that?

No. 20. *Arithmetical Problem.*—How long will it require to plow a plot of land 20 rods square, the furrow to be ten inches wide, and to cut clear through the corner each time, the team to walk one mile and a half in an hour, and a half minute to be allowed for turning each corner?

CONTRIBUTED PUZZLES.

Many of our young friends have kindly contributed rebuses, enigmas, charades, and puzzles of various kinds, and have, perhaps, wondered that they have not been printed, or at least that no mention has been made of the fact. We always examine such favors very carefully, and if they are of the right stamp, and *original* or *new*, are glad to publish them, and to give credit to the authors. We have *stacks* of letters containing puzzles that were no doubt new to those who sent them, but which we have often seen in print, and it would occupy too much space to give explanations for not publishing in every case. You know the *Agriculturist* is for the benefit of the *whole family*, and should contain what will be of general interest. It is a very pleasant intellectual exercise to construct puzzles, but to originate a really good one, usually requires considerable practice. Do not be discouraged, therefore, if your first attempts are not printed, and please don't scold if your letters appear to be unnoticed. When somebody invents a reading, writing, and thinking machine, we hope to be able to answer all our letters personally.



Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

Kinds of Grapes and Number per Acre.—J. L. Neyman, Guernsey Co., O. The number of vines per acre must depend upon the method of training. Some cultivators plant in squares 6 feet apart (1210 per acre), while others prefer 8 feet (680 per acre). In some of the vine growing districts of Europe they are set 4 feet distant each way (2722 to the acre), and trained to stakes about five feet high. Your selection of equal quantities Delaware, Diana, Concord, and Hartford Prolific is not a bad one. The Delaware is still held at such prices, that planting many of them is costly. The Isabella and Catawba are still valuable sorts in many localities. Bright's Grape Culture (50c.) will give you valuable information.

Designating a Grape.—J. S. Nixon, Franklin Co., Pa. It is impossible to tell the name of your grape from the description given. Excepting with the well known marked sorts, such as Isabella, Catawba, Rebecca, etc., to distinguish the variety even from the wood, foliage and fruit, much less can one recognize a new sort from a mere description.

Cranberries thrown out by Frost.—B. Ryan, New-London Co., Conn. If possible, flood your cranberry plot late in the Fall, and leave the water on, until freezing weather is over in the Spring. This can probably be done, as you say the land is low and wet. If it can not be flowed, the plants must take their chance—probably enough will remain uninjured to produce a fair crop.

Cauliflower.—D. H. Wells, Suffolk Co., N.Y. The cauliflower looks much like a cabbage while growing. Instead of forming a compact head of leaves, it spreads out into a flat, or oval shaped head of "flowers," which somewhat resemble coral in appearance. Cook as cabbage, only not quite as long. They are usually esteemed a luxury.

Quince Stock for the Pear.—J. Borland, Bucks Co., Pa. There is a real difference between the common (orange,) Angers, and Portugal quinces. The Angers stock is the one used by nurserymen for budding the pear upon.

Cypripedium *pubescens.*—Wm. L. Burton, Edgar Co.. Ill. From the pencil sketch and description you forwarded, we judge the plant alluded to is the Cypripedium, or Moccasin-flower—probably *C. pubescens* (Large Yellow Lady's Slipper) or possibly *C. spectabile*, usually found in moist places under the shade of trees. We have transplanted it with some success, but it needs shade in the flower border.

Plant from Seed found in Coffee.—Philip Withnan, Beekersville. It is not easy to name a plant from the appearance of the leaf alone. The one forwarded resembles some species of fig, but the flowers are necessary to determine accurately. See the article "Naming Flowers," on page 210 of this number.

A Singular Leaf.—J. A. Anderson, Hunterdon Co., N. J., sends us a *lusus naturæ*, found in his garden. A large cordate (heart-shaped) leaf resembling rhubarb, has springing from the main rib at its base, a stem an inch and a half high, bearing a small leaf of an entirely different character, being peltate (shield shaped), quite similar to the leaf of the nasturtium. The phenomenon is unexplainable. Extraordinary growths of this kind called "sports" are due to peculiar circumstances often beyond detection.

Lily of the Valleys.—P. P., Pottsville, Pa. This plant mentioned in the Song of Solomon, is belived by some commentators to be identical with the Egyptian Lotus or the Nelumbium *speciosum* mentioned on page 209 of this number of the *Agriculturist*. The glowing account given of the "Huleh Lilly" by an author who supposes it identical with the "Lilly of the Valleys" is probably partly due to his lively imagination, and desire to make a readable work.

The Honolulu Squash.—Several inquirers. We have specimens of this highly praised variety under cultivation, and shall be able to give a definite opinion of its qualities after full trial. The vines now appear hardy and promising—the fruiting will decide whether it is worthy of introduction to our list for distribution.

Spelt Wanted.—We have had repeated inquiries where seed of Spelt or German Wheat can be obtained by parties who wish to experiment with it in districts infested by insects preventing success with other grain. Those having a supply, should advertise the fact—in the appropriate pages—we can not introduce business announcements into the reading columns as some desire.

Destroying Cut Worms at Night.—J. M. Rose, Clearfield Co., Pa., after trying various remedies proposed for the cut worm, cleared his garden of them by examining each plant several evenings by candle light, and crushing them with a pair of pincers. As they commit most of their depredations in darkness, this is more effectual than seeking them in the morning, besides saving a night's destruction, which is considerable where they are plentiful. The pincers relieve from the disagreeable work of handling the worms.

Insect Wanted.—Will "Y. Z," of Cincinnati, who sent "C. T." of Norwich last July some twigs of grape vine, inclosing a small brown beetle, watch for any appearance of the same, either in the larva or the perfect state, in the same location where he found them last year, and send them to the above direction. He would confer a great favor.

Acid for Insect Specimens.—Alexander Houston, Franklin Co., O. Entomologists use Prussic Acid, one of the most virulent poisons known, for killing insects to be preserved as specimens. The point of a needle is dipped in the acid, and inserted in the body of the insect near the wing. This requires great care in handling, and is unsafe to keep where children or inexperienced persons can have access to it. We prefer to use chloroform. A few drops upon a sponge, placed in a tight box with the insect, will soon put him asleep beyond awaking.

Where the Borer Works.—T. Cooke, Winnebago Co., Wis., writes that the apple tree borer, (*Saperda bivittata*) does not work at the bottom of the tree, but is found from one to two feet above the surface of the ground; and that he has taken out hundreds of them during the past year or two. They will be found as described by him after they have been at work a few months. The egg of the parent beetle is deposited within a few inches of the ground, and the larva when hatched bores his way upward, emerging at length some distance from his first starting point. Mr. Cook thinks the upper side of leaning trees most liable to attacks from the borer. Have any other of our readers observed this?

Elder Leaves for Insects.—In answer to the inquiry made as to the usefulness of elder leaves to repel insects, several subscribers state they have found them worthless. S. of North Hempstead, N. Y., writes "What does the striped bug care about smell? Has he any nose? I have tried coal tar, spirits turpentine, soot, guano and elder leaves, and they do no good." They certainly have noses enough to smell out growing vines, as every year's loss bears witness, but whether any of the above articles are unpleasant to their senses, we can not answer. "S." recommends protecting plants with a covering of millinet, or fine wire cloth, with which we agree.

Specimens of Squash Bugs sent in by Wm. H. Niles, Ottawa Co., Mich,, are named *Coreus tristis* by entomologists. These insects when full grown, measure about six tenths of an inch in length. Their color is rusty black above, and a dirty ochre yellow beneath. They pass the Winter in a torpid state, in crevices of fences, walls, etc., whence they issue on the return of warm weather. They seek the shelter of the young squash and pumpkin vines, and pair and lay their eggs during the last of June and first of July. The young insects puncture the leaves and live upon the sap, which injures or destroys the vine. The eggs are laid and hatch in successive broods, consequently the plants are in danger the Summer through. We know no certain remedy but picking off the eggs and insects by hand. If this is done early in the season, it will require but little time daily, and prevent their multiplying beyond control.

Seventeen Year Locusts.—E. A. Tanner, Rockland Co., N. Y., and several subscribers in New-Jersey and other sections, will please accept our thanks for specimens of these insects both in the pupa state and fully developed. Other matters have prevented our giving a full illustrated article on this insect this month. The predictions of their appearance this year have been verified in many sections heard from, and their abundance has attracted great attention. Entomologists will doubtless improve this opportunity for learning more of their habits.

The Comprehensive Farm Record.—We have repeatedly urged upon our readers the great advantage of keeping a complete journal or diary of farming operations. No one who has a well kept record of the kind extending over a few years, would willingly part with it, which is good evidence of its value. The principal objection made to such a work, has been the trouble of attending to it. Much time is required to note all the facts one would wish to remember, and to arrange them systematically for easy reference in future is no small task. A book bearing the title at the head of this article, by Franklin B. Hough, and published by Saxton, Barker & Co., N. Y., in a great degree removes this difficulty. By a very simple system, the pages with appropriate headings are arranged so that notes on farming operations, accounts of various crops, and animals, weather phenomena, comparative forwardness of seasons, first appearance of birds, etc., can be readily entered, requiring but a few minutes time each day. The topics include nearly or quite every thing in farm life upon which observations are requisite or desirable. Of course, only a part of these need receive attention, but many points of value are here suggested that might otherwise pass unnoticed. The price of the work $3, at first thought, seems objectionable; but though not a large volume, it contains the necessary blanks for use during twenty five years, making the cost but the small sum of twelve cents a year.

Bees and Bee Keeping, a book of 286 pages, by W. C. Harbison, an experienced Apiarian, has been received. The practical parts of the work are plainly written, and contain suggestions of value to the bee keeper. The directions for transporting bees to California or other distant points are timely. As every man sees things in a different light, theories will differ, but the author gives his reasons clearly for his own views on disputed points, and in the main treats those differing from him fairly. It is a noteworthy fact that bee writers generally seem imbued with peculiar acerbity in their discussions of mooted questions; whether this be derived from the insects of which they treat, is a question on which we should like to hear their opinion. The subject of bee keeping is of almost inexhaustible interest, and of great economical importance, and we hail every record of facts and deduction from experience by adepts, as an acquisition to agricultural literature.

Bone Mills.—J. P. Prescott, Shelby Co., Tenn. The regular bone mills cost $80 to $100. We have seen the "People's Mill," $30 and $40 sizes, grind bones very well, after they had first been broken up by hand.

Cause of Glanders.—E. J. Dodge, Carroll Co., Ill. This disease is highly contagious where horses are exposed to actual contact with an infected animal. It most frequently originates with horses reduced by excessive overwork and scanty feeding. Animals in this condition are in danger of having glanders follow the contraction of a cold, which under other circumstances, would be of no serious consequence. The proper treatment of the disease requires the best veterinary skill.

Substitute for a Bridle.—One of our Agriculturist boys sends a description of a contrivance of his own to hold horses with a halter when taking them to water. It consists of a block some two inches square, hollowed on one side to fit the top of the horse's nose, under the nose-piece of the halter, from which it hangs by two hooks driven in the front. Tacks are driven into the hollowed side of the block where it comes against the horse's nose, the heads being left protruding a little. A pull upon the halter brings these against the horse's nose. If we understand the construction, this is objectionable, as being likely to wear and wound the skin which is quite tender on this part. It would be better to take time to use a bridle.

Measly Pork.—S. D. Jared, Whiteside Co., Ill. sends an abstract of a pamphlet, for which we have not space, arguing that measly pork contains the larva of tapeworm, and that its presence in man may be caused by eating swine's flesh. The full discussion of the subject belongs to a medical rather than to an agricultural journal.

Where to Buy a Farm.—Frederic C. Law, Ozaukee Co., Wis., and others. We could not well decide upon the propriety of a purchase in any section without a personal inspection and investigation of the surrounding circumstances, and no one is safe in buying without using his own eyes upon the tract offered for sale. We have no acquaintance with the new land described in the circular forwarded. A young man "by careful management, and industry" may succeed almost anywhere.

Will it Pay to Hire a Farm?—Chs. H. Bliss, Providence Co., R. I. Sometimes, yes, sometimes, no

If a man have practical skill, sufficient capital, and can secure favorable terms, there is good prospect of success. If he has had no experience in the business, the chances are against him.

A Mowing Machine Trial of the Right Kind.—The trial of mowing machines and reaping machines, announced to be held at Providence, R. I., June 26, by the R. I. Society for the Encouragement of Domestic Industry, strikes us as having been got up in the right way. The announcement says: "It is the intention of the Society to furnish an opportunity to test the relative merits of different Machines in the presence of all persons interested, but no premiums will be awarded, and *no discriminating report will be made at the close of the exhibition by the committee superintending the same.*" This is the true way. Let there be ample opportunity for every manufacturer to show what he has to offer; and then let every farmer be his own judge of what is best for his purpose. The judgement of the mass will be better than that of a small committee, and often avoid bickerings and complaints of unfairness, or partiality.

Gooseberry Show at Patterson, N. J.—This novel show of great gooseberries is appointed on July 16th. The weighing will begin at 3 o'clock P M., at George Parrott's, 301 Straight-st. As large as were the berries last year, they are expected to excel this year.

Agricultural Library.—We are glad to learn from Mr. Chas. J. Elliott, that the Montgomery County (Pa.) Agr. Society have just established a library for the use of the Society, and voted an annual appropriation of $100 to keep it supplied with agricultural and horticultural literature. Such a library would be valuable in connection with every town and county association. If kept at a central point, the members could draw out and exchange over books several times during a year, and a few books would be used by a considerable number of persons, who might not perhaps purchase them for their own individual libraries. The Library of the Montgomery Society, is to be kept in the new and spacious village Library Buildings at Morristown. Mr. E. gives especial credit to Col. Thomas P. Knox, Pres. of the Society, for active and efficient efforts in getting up the Library.

Use of Old Plaster of Paris.—We have inquiries from several Dentists, and Stereotypers, as to the value of Plaster, after it has been used in making molds. Ordinary ground plaster, such as is used on soil, contains considerable water. Calcining, or burning this drives off the water, and it is then the material used for making plaster casts of various kinds. On wetting it, it takes back the water expelled by heat, and hardens. It is then of course like the original unburned plaster, and may be used for the same purposes in cultivation. The only difficulty will be to pulverize or grind it, which will be necessary after it has become hardened.

Tarring Shingles.—E. Y. Palmer, of Hillsdale Co., Mich., writes that he is about to use white-wood shingles, and proposes to saturate them with tar, by heating it in a kettle, and letting the shingles lie in it until the tar is thoroughly soaked in. This would seem to be an excellent plan. We have had no experience or observation of such a practice to judge from. Perhaps some of our readers have tried the plan, and can speak of the results.

Church for Deaf Mutes. The amount forwarded to this institution by a reader at Norwalk, has been handed to Rev. Mr. Gallaudet, the Rector. One feature connected wirth this enterprise is worthy of notice. By the efforts of the rector, who is continually engaged in their behalf, places of employment have been procured for a large number of this afflicted class: so that the work of doing good to the bodies as well as the souls of men is not neglected. The parties interested, have already obtained possession of the church, and by help of the benevolent, it will, we trust, be made a permanent institution.

Knitting Machines Wanted.—D. H. H., of Montgomery Co., Md., asks where these can be obtained, and at what price. If there is a really good one in the market, the manufacturer would find it to his interest to advertise it.

The Premiums Still Open.

[FOR SPECIAL PREMIUMS SEE LAST PAGE.]

[The premiums below are offered for subscribers to Volume XIX of the *American Agriculturist* whenever received. Those having partial lists made up can complete them, and other new lists can still be formed.]

Every person collecting names for premiums, can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender. Any premium will be paid as soon as the list for it is completed, if we have the duplicate lists to refer to.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid. (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8½ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines,** new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two years' use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia,* now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Price, $45.

Premium XXVIII.—Having proved the accuracy and convenience of Kendall's new and improved *Portable* or *Aneroid Barometer*, we propose one of those instruments as a premium to any person collecting and sending in 66 subscribers to the *American Agriculturist*, at the lowest club price, 80 cents each, or 33 subscribers at $1 each. These barometers in form resemble a large watch, or small round clock, with the varying pressure of the atmosphere indicated by an index upon a dial plate. Each instrument is packed in a neat leather case, and can be carried about readily, and be hung up wherever desired. They are just as accurate as the long, inconvenient mercurial barometer, and every way a more desirable instrument for common use in predicting changes in the weather, marking the hight of a place above the level of the sea, etc.—Price $10.

☞ For other Premiums see last-month, page 187.

Business Notices.

☞ *Sixty Cents a Line of Space.*

A CARD.

ITALIAN BEES.

Much interest has been recently awakened in regard to the "Italian Bees" (*Apis Ligustica*), and owing to my incidental connection with the subject, I am in daily receipt of a great number of questions of all sorts, relating to the value of the bees, their origin, the purity of those brought to this country, whether they can be obtained through the government, on what terms they are offered for sale by myself and others, etc., etc. Not having time to respond individually to these various inquiries, I will here give a general statement of my own connection with the bees, and such information as can be condensed in this card, trusting my correspondents will accept this instead of a private letter. In Autumn of 1858, while preparing to visit Europe with my family, I received from the Agricultural Department of the Patent Office at Washington, a request, and subsequently a Commission, to make sundry investigations and some purchases in behalf of the Government. Among other things embraced in my Commission, was an investigation in regard to the Italian Bees, and an order to purchase a few hives for the Department. After some unsuccessful inquiries, in various directions, I placed myself in communication with the secretary of the Paris Apiarian Society, by whom I was referred to a gentleman in constant intercourse with the Valtelin, as the only reliable man from whom to procure the bees in absolute purity. With my letters from the Paris secretary I visited the gentleman referred to, among the Italian Alps, and becoming satisfied of the purity of the bees, I purchased ten swarms —the extent of my commission—and gave full directions for their shipment via Havre, by the steamer Arago, on the 18th of October. Becoming interested in the subject, I also purchased three swarms to be forwarded for my own homestead. I wrote to the captain of the Arago, and to agents in Havre and New-York, giving directions to have special care taken in forwarding them safely. I also paid the seller 33 per cent in advance of his own price, to guarantee their safe arival, hoping by this means, to secure the greatest possible care on his part. Two months afterward, while in England, I learned by letters from home, that the bees did not arrive by the Arago. I immediately wrote to the seller, and after some time learned from him, that he had thought proper to send them via Genoa. This was contrary to my express orders and the terms of the guarantee. The bees all came dead, and the guarantee remains yet to be made good to the Patent Office and to myself. This will explain why the Department has no bees for distribution as yet; and will give due credit for the efficient and timely efforts made to secure their early introduction at the expense of the government.

The attention given to this subject, and what I learned in Europe respecting these bees, awakened not a little interest, and I concluded to send over a hundred swarms for introduction into the United States. The commission for the Government not allowing this to be done at public expense, as I should have preferred, I bought them on my own account. Ten of these I undertook to bring home with me, and stipulated with the seller to himself come over with the remaining 90 swarms.

Of the 10 swarms brought with me all are now dead. Of the 90 swarms only 17 have yet been sent forward, of which a part died on the way, and only two swarms are now living. These, I am happy to say, are now doing finely, and the progeny being constantly hatched, show them to be of absolute purity. My bee-keeper has had them under his personal supervision since the moment they were removed from their stands in the Valtelin.

Soon after my arrival here in February, the numerous letters of inquiry pouring in upon me, compelled the issue of a circular, stating that I expected a bee-keeper with 90 hives, and that he would "*probably* be ready to send them out in May...." The non-arrival of a large portion, and the death of part of those coming over alive, of course extinguished this probability, and I issued another circular, stating the facts, and declining to receive any money, or to deliver any bees, before Septemper at the earliest.

Having seen in some of the New-York papers a "challenge" to exhibit my bees, I have only to say that—learning from reliable sources that there was a probability of impure bees being brought from Germany—at the suggestion of several intelligent bee-keepers, I cautioned the public by a card in the last *Agriculturist*, to satisfy themselves of the purity of any purchases they might make, advising them to ask to see a bill of sale from me. This, of course, referred only to such bees, as should be offered *as having come from my stock.* I have named no parties, and shall not be drawn into a controversy with individuals who may, with or without reason, feel touched by that caution.

If these bees prove to be as valuable to the country, as it is *hoped* they will, it is of the greatest importance that no spurious or impure stock be disseminated. I am certain that my own bees are pure, and they are under the constant supervision of my German bee-keeper, and also of Messrs. Langstroth, Carey, and Brackett, who are well-known and reliable apiarians, and who take great interest in the enterprise. We are determined not only to guard against impurity or crossing, but also to *test their value before they are offered for sale.* I do not look for pecuniary profit, but having expended a very large sum in the enterprise, I shall of course desire to secure at least a partial return for the outlay—if the bees prove valuable. If they do not, I shall cheerfully pocket the loss on the experiment.

My original, and present plan, is, to distribute pure queens to reliable apiarians at different points, from which they may be more readily and conveniently disseminated over the country. The only condition I have asked, or expected to ask, is, that those who receive the pure queens from me, either share with me the proceeds of the first sales, or else decline parting with their bees to others during the first year. Only in this way can I hope to receive a reimbursement of my expenses. I have not the least desire or intention of being considered the only importer or propagator of pure Italian bees—indeed, bee-selling is foreign to my legitimate business of growing trees and plants, and I have only been drawn into it incidentally, as above observed.

For answers to the numerous questions addressed to me by correspondents in regard to the management of bees generally, I must refer to the valuable works on this subject by Langstroth, Quinby, Harbison, etc.

SAMUEL B. PARSONS.

Flushing, N. Y., June 9, 1860.

GROVER & BAKER'S
CELEBRATED NOISELESS
FAMILY SEWING MACHINES,

No. 495 Broadway, New-York; No. 18 Summer st., Boston; No. 730 Chestnut st., Philadelphia; No. 181 Baltimore st., Baltimore; No. 58 West Fourth st., Cincinnati. * * *For our own family use* we became *fully satisfied that Grover & Baker's is the best, and we accordingly purchased it."—American Agriculturist.*

☞SEND FOR A CIRCULAR.☜

WHEELER & WILSON'S
SEWING MACHINES.
"The best in use."—*American Agriculturist,* 1860.
Office 505 Broadway, New-York.
SEND FOR A CIRCULAR.

Agricultural Exhibitions for 1860.

STATE EXHIBITIONS.

Name.	*Where held.*	*Date.*
National Horse Show	Springfield, Mass.	Sept. 4—7
New-Jersey	Elizabeth	" 4—7
Illinois	Jacksonville	" 10—15
Vermont	Burlington	" 11—14
Kentucky	Bowling Green.	" 18—22
Nebraska	Omaha	" 19—21
Wisconsin	Madison	" 24—20
Pennsylvania	Wyoming	" 22—25
Missouri, (St. Louis Agr. and Mec. Ass'n	St. Louis	" 24—29
Ohio	Dayton	" 25—28
Maine	Portland	" 25—28
Iowa	Iowa City	Oct. 2—5
New-Hampshire	Manchester	" 2—4
New-York	Elmira	" 2—5
Indiana	Indianapolis	" 15—20
Georgia	Augusta	" 22—27
Alabama	Montgomery	" 29—Nov. 2

COUNTY EXHIBITIONS.

NEW-YORK.

Saratoga	Saratoga Springs	Sept. 4—7
Queens	Jamaica	" 19
Monroe	——	" 19—21
Rensselaer	Lansingburgh	" 19—29
Westchester	Mt. Kisco(New Castle)	" 25—27
Putnam	Brewster's	" 25—27
Oneida	Utica	" 26—28
Ontario	Canandaigua	" 26—28

Market Review, Weather Notes, etc.

American Agriculturist Office,
New York, Monday Evening, June 18, 1860.

Heavy as were the receipts of Breadstuffs, reported in our last Review—those of the past four weeks have been much larger. The unusually extensive arrivals have discouraged holders, who have been quite anxious to sell, and have generally reduced prices to tempt buyers to purchase. At one time, an increased supply of shiproom and a consequent decline in rates of freight to British ports assisted sellers in their efforts to dispose of their stocks, as shippers were induced to operate with considerable freedom. During a week or so past, however, freights have again advanced, vessels having become scarce, and there has been decidedly less inquiry for export. The demand from the home trade has been restricted. The competition to sell has had a depressive influence on the market, which has steadily tended downward. The decline in prices of Flour, since our last, has been 15@45 cents per bbl., or an average falling off of 25 cents per bbl., which would make the loss on the reported sales of the month over $100,000. This result has been very injurious to holders, whose confidence has been superseded by manifest distrust in the future, and a strong desire to realize immediately. Buyers, however, are purchasing with reserve, as they anticipate a further decline. Shippers allege that there is no prospect of an extensive export movement, unless produce can be obtained here at rates sufficiently low, to afford some margin for profit, on shipments to European markets.... The decline in the value of Wheat is still more remarkable than even that in Flour. Our comparative tables, below, indicate a reduction of 10@15 cents per bushel, and the tendency is toward a lower range. The stock here is large, and as millers are not buying freely, the main reliance of holders who want to sell, is upon shippers. These will only purchase, when they can do so advantageously, there being less disposition to invest at a venture, than was the case early in the year. Their movements are therefore more uncertain this season than usual....Corn has been very irregular, but it is now decidedly cheaper than it was a month ago: The bulk of the available supply is Mixed Western, much of which has been received in very poor order. ..Rye has been quiet, and Barley has been neglected..The transactions in Oats have been quite moderate. Prime lots, especially of State, are sparingly offered. The average quality of a large portion of the receipts is inferior, as is also the condition in which very many boat-loads arrive. Hence the wide range of prices now current in this market.... Cotton has been very dull, and prices have fallen off ¼@⅜c per lb. The accounts from the South are on the whole, favorable. The continued drouth is doing some injury on the high cotton lands, but benefitting the low and bottom lands. The weather has become excessively hot at the South, and highly favorable for the growth of the plant.. Provisions have been in fair demand at irregular prices, however....Hay has been more freely offered at easier rates. The sales have been of average magnitude.... Hops, Rice, and Tobacco have been in good request..... Tobacco has declined slightly....The inquiry for wool in this and the principal markets on the seaboard has been limited. The new clip is making its appearance at various points in the interior, and thither buyers are directing their attention at present. From our advices we infer that prices will open considerably lower this season than last. The Philadelphia Commercial List thinks that the decline will be 2c.@5c. ℔ lb., from the opening rates in 1859. Others predict a falling off of 5c.@10c. ℔ lb. An unusually large clip is expected. Ohio, it is thought, will produce less coarse and more fine wool this season than last. Michigan will furnish an increased supply, as it is said that the clip in that State will yield this year between three and a quarter and three and a half millions of pounds of wool, of which about one third will probably grade as high as three quarter and full blood merino. Illinois is looked to for heavier stocks, and similar results are expected from the clip in most other States in which sheep-husbandry receives anything like general attention. It is also anticipated that the competition among buyers will be unusually brisk, and this may help to keep up prices. Commissions to purchase to the amount of over three million pounds are in the hands of agents in Michigan. One man alone has orders to the extent of almost a million pounds. It is stated that the agents of certain manufacturers are recklessly endeavoring to fix prices which will be ruinous to themselves and others. At present, the stock of low grades in the hands of dealers is small; but the stock of finer grades is larger than ever before, owing, in a great measure, to the extensive importations of foreign wools. The stock of foreign wools in the Eastern markets is large, and considerable quantities are known to be on the way hither....Other descriptions of Produce have been moderately dealt in.

Current Wholesale Prices.

	May 19.		June 18.	
Flour—Superf to Extra State	$5 15	@ 5 50	$5 00	@ 5 40
Superfine Western	5 15	@ 5 25	5 00	@ 5 10
Extra Western	5 35	@ 7 75	5 15	@ 7 30
Fancy to Extra Genesee	5 45	@ 50	5 40	@ 7 50
Super. to Extra Southern	6 15	@ 7 75	5 60	@ 7 50
Rye Flour—Fine and Super	3 40	@ 4 20	3 40	@ 4 20
Corn Meal	3 70	@ 4 00	3 40	@ 3 85
Wheat—Canada White	1 50	@ 1 60	1 40	@ 1 50
Western White	1 50	@ 1 65	1 40	@ 1 52½
Southern White	1 50	@ 1 70	1 42½	@ 1 55
All kinds of Red	1 24	@ 1 45	1 19	@ 1 35
Corn—Yellow	75	@ 77	67	@ 71
White	78	@ 80	70	@ 78
Mixed	70	@ 72	62	@ 64
Oats—Western	40	@ 41	37	@ 41½
State	41	@ 42	41½	@ 42½
Southern	37	@ 39	37	@ 40
Rye	87	@ 88	85	@ 87
Barley	70	@ 82½	60	@ 70
White Beans	90	@ 1 10	90	@ 1 00
Hay, in bales, per 100 lbs.	1 00	@ 1 25	75	@ 1 00
Cotton—Middlings, per lb	11⅜	@ 11⅝	11	@ 11⅜
Rice, per 100 lbs.	3 62½	@ 4 50	3 75	@ 4 75
Hops, crop of 1859 per lb.	6	@ 13	6	@ 12
Pork—New Mess. per bbl	17 90	@ 18 00	18 25	@
Prime, old, per bbl	13 62	@ 13 75	13 62½	@ 13 75
Beef—Repacked Mess	8 50	@ 10 50	8 75	@ 10 25
Country mess	5 00	@ 6 00	4 75	@ 5 75
Hogs, Dressed corn, per lb	7	@ 7¼	7⅛	@ 7⅞
Lard, in bbls. per lb	11	@ 11½	11⅜	@ 11¾
Butter—Western, per lb.	12	@ 17	9	@ 16
State, per lb.	13	@ 19	12	@ 19
Cheese, per lb	6	@ 11	7	@ 11
Eggs—Fresh, per dozen	11	@ 12	12½	@ 13½
Poultry—Fowls, per lb.	13	@ 15	12	@ 14
Geese, per lb.	10	@ 12	8	@ 10
Ducks, per lb.	16	@ 18	15	@ 18
Turkeys, per lb.	16	@ 17	12	@ 14
Wild Pigeons, per doz.	1 00	@ 1 25	75	@ 87
Feathers, Live Geese per lb.	44	@ 54	44	@ 54
Seed—Clover, per lb	8	@ 9	8	@ 9
Timothy, per bushel	4 37	@ 4 50	4 37	@ 4 50
Sugar, Brown per lb.	6	@ 8	6¼	@ 8¼
Molasses, New-Orleans, pr gl	46	@ 50	47	@ 50
Coffee, Rio, per lb	12½	@ 14	13	@ 14¼
Tobacco—Kentucky, &c. pr lb	3¾	@ 13	3	@ 13
Seed Leaf per lb.	6	@ 25	5½	@ 25
Wool-Domestic fleece, per lb.	32½	@ 57½	32½	@ 57½
Domestic, pulled, per lb	27½	@ 47½	27½	@ 47½
Hemp—Undr'd Amer'n pr ton.	120	@ 150	125	@ 150
Dressed American, per ton	160	@ 200	160	@ 200
Tallow, per lb.		@ 10¼	9¾	@
Oil Cake, per ton	32 00	@ 36 00	29 50	@ 36 00
Apples—Dried, Per lb	4	@ 5½	4½	@ 6
Dried Peaches—pr lb. South'n	6	@ 14	6	@ 14
Dried Cherries, pitted per lb.	20	@ 22	20	@
Potatoes—Mercers, p. bbl.	1 75	@ 2 00	1 25	@ 1 75
Peach Blows, per bbl	1 87	@	1 50	@ 1 62
Nova Scotia, per bushel	55	@ 60	50	@ 55
New Bermuda, per bbl	4 00	@ 4 50	5 00	@ 5 50
New Southern per bbl			2 75	@ 3 50
Onions, New Red, per bbl			5 50	@
Turnips, New, p. 100 bunch			3 00	@
Cabbages, per 100			5 00	@ 6 00
Cucumbers, South'n p. bbl.			5 00	@
Squashes, South'n, per bbl.			2 00	@ 2 25
Strawberries, p. 100 baskets			3 00	@ 4 50
Large, per quart box			13	@ 16
Cherries, per lb.			6	@ 12
Gooseberries, per bushel			1 50	@ 1 75
Asparagus, p. bunch	6	@ 10	6	@ 8
Rhubarb, per 100 bunches	2 00	@ 4 50	3 00	@
Radishes, per 100 bunches	1 50	@ 3 00	2 50	@ 4 00
Green Peas, per bbl.	2 00	@ 4 00	2 00	@ 2 50

TRANSACTIONS AT THE N. Y. MARKETS.

Receipts.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 bus. ds. *this* mon	354,970	874,505	2,079,922	26,558	25,288	481,891
27 bus days *last* mon	287,634	174,601	531,820	17,152	25,251	301,377

Sales.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
26 business days *this* mon.	410,210	1,412,100	2,281,500	38,600	10,200
27 business days *last* mon.	367,385	910,500	952,500	53,100	156,900

Breadstuffs exported from N. Y., from Jan. 1 to June 13.

	1859.	1860.
Wheat Flour, bbls.	280,950	397,358
Rye Flour, bbls.	3,132	4,209
Corn Meal, bbls.	38,223	42,888
Wheat, bush	21,916	861,622
Corn, bush	96,930	1,137,325
Oats, bush	——	95,464

The receipts at tide-water of the principal kinds of Breadstuffs, from the opening of the Canals to and including the 7th inst., have been as follows:

	1858.	1859.	1860.
Canal open—	April 25.	April 15.	April 20.
Flour, bbls.	243,610	93,813	185,520
Wheat, bush	2,161,682	275,314	1,800,084
Corn, bush	499,141	441,342	2,996,744
Barley, bush	274,937	114,312	73,013
Oats, bush	814,187	1,725,108	1,725,198
Rye, bush	89,765	67,164	38,683

N. Y. Live Stock Markets.—The Cattle Markets have been even more abundantly supplied during the past four weeks than for the month previous. The total receipts of beeves at the N. Y. City Markets for the four weeks ending June 13, numbered 16,744, or an average of 4,186 per week. This is 567 above the average for the same period last year, and more than could be sold at prices which would yield a profit to those who had purchased at the West. Many of these cattle were brought at rates quite as high as could be obtained at the overstocked markets here. The weekly receipts have been as follows: For market of May 23, 4,254 head—trade good, with an advance of ½c. per lb., estimated dressed weight, over the previous week, May 30, 3,709 beeves, a very large proportion of which were in prime order, and sold a shade better than at the previous market. June 6, 4,666 cattle—too many to sell readily. Sales dragged, at a decline of ½c. June 13, 4,115 head, which coming in "strawberry time" were more than could be readily sold at a further decline of ½c. per lb. The sales at this market ranged; for prime beef, 9c @9½c. per lb., estimated dressed weight; medium, 8c.@8½c.: poor 6c.@7½c.; average of all sales, 8½c., or near 1½c. less than one year ago. From present indications there will be no scarcity of cattle during the Summer, as many drovers are still holding their cattle back for higher rates. An unusually large proportion of the above receipts were from the state of Illinois, and showed good feeding.

Veal Calves have been very abundant during the month, and prices have ranged comparatively quite low. In addition to the large numbers reported, the calves themselves have been quite large, thus increasing the amount of veal. For the four weeks just ended, 5,177 live calves have been received at the regular markets, besides large numbers sold from the boats direct to butchers. At no one market previous to the last could they all be disposed of, although offered at very low prices. They have mainly sold at 5c.@5½c. per lb. live weight, for prime veals. 4c @4½c. for medium qualites, and 3½c.@4c. for poor. The total sales have been at even lower rates.

Sheep and Lambs have come in more freely, the receipts being 33,161 during the month ending June 13th, against 22,906 for the previous month. There has been a steady increase in the supply at each succeeding market, until the last sales day (June 13) when 11,685 were reported for the week—the largest number for any one week since last December. The market was dull and prices declined to 4c @4½c.—with a very few of the best, at 5c. per lb. live weight for sheep, and 7c.@8c. for lambs.

Hogs.—Receipts have been light of late, but sufficient for the diminished demand during the heat of Summer. For the four weeks just ended, 17,472 live hogs have been received and sold at pretty uniform rates, viz.: 6c.@6⅜c. per lb. live weight, for prime corn fed hogs: 6c.@6¼c. for light corn fed hogs; and 5½c.@5⅜c. for still fed. Hogs are now selling as fast as they arrive.

The Weather since our last report, (May 18,) has mainly been favorable to vegetation, and crops are generally in a flourishing condition, although the drought, which prevailed in some localities last month (there being no rain for six weeks), permanently injured the hay crop, and prevented corn and late sown grain from vegetating readily. Subsequent rains, however, brought the crops forward, and the late hot weather has caused them to grow rapidly. But a soaking rain would now do great good to all kinds of crops in this vicinity. Our Daily Notes, condensed, read thus:—*May* 19, warm with showers—20, clear and cool—21, cool with wind and showers—22, showery—23, 24, 25, clear, fine and warm—26, cloudy A. M., heavy rain P. M.—27, cloudy—28, cloudy A. M., clear P. M—29, clear and fine—30, cloudy, heavy showers at night—31, clear and hot, showers at night; high wind, amounting to a tornado in Western N. Y.—*June* 1, 2, 3, clear, fine growing weather—4, clear and warm, with showers at night—5, rainy most of the day—6, clear and warm—7, showery—8, clear, fine day with showers at night—9, 10, 11, cool, but fine—12, 13, 14, 15, 16, 17, 18, clear and warm, everything growing rapidly, but rain needed.

The Tornadoes.—June, thus far has been prolific in heavy storms and tornadoes in some parts of the country, but mainly at the West. There was a heavy blow, in Western New-York, on the night of May 31, which uprooted trees, demolished buildings, and destroyed a few lives. It was limited in extent. The next was on the 2d of June, and was mainly confined to Western Illinois, and Eastern Missouri, along the Mississippi River. This was a violent wind accompanied by rain and hail, and much damage was done to crops, trees, building and shipping, with some loss of life. But the great tornado, one of the most violent ever known in this country, occurred during the night of June 3d, beginning in south-eastern Iowa, thence over the Mississippi into Illinois, and so on into Kentucky, and across North Carolina, on the 4th. The wind was most violent in Lynn Co., Iowa, where several villages were demolished, and hundreds of people killed. A multitude of animals, a large extent of growing crops, and a great number of farm buildings were destroyed.

Thermometer at 7 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) *s* indicates snow; *r* rain.]

MAY.

1......44*r*	8......59*r*	15......48	22......47*r*	29......53
2......47*r*	9......49*r*	16......48	23......55	30......55*r*
3......50*r*	10......54*r*	17......48*r*	24......56	31......56*r*
4......49	11......56	18......53*r*	25......54	——
5......50	12......56*r*	19......58*r*	26......64*r*	Av'age.53
6......53	13......58	20......56	27......54*r*	
7......56	14......58*r*	21......48*r*	28......52*r*	

JUNE.

1......60	4......62*r*	7......62*r*	10......56	13......60
2......60	5......61*r*	8......62*r*	11......55	14......62
3......61	6......60	9......56	12......58	15......62

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

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Sold on Commission,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.

ISAAC EMENS, 226 Front-st., New-York.

(SUCCESSOR TO THE FIRM OF HAIGHT & EMENS.)

Refers to the Editor American Agriculturist.
" E. R. Cooper, Cashier Market Bank, New-York.

HAVE YOU A SON OR DAUGHTER TO EDUCATE—Send for the new Catalogue of the Fort Edward Institute, N Y Superb brick buildings; 18 teachers with the best facilities in every branch of Commercial, Classical or Ornamental study. $36 for 14 weeks. Term begins August 23d. Address Rev. JOSEPH E. KING,
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PITTSBURGH WATER CURE. A first class CURE, in its sixth year. room for over 100 patients. Address Dr. H FREASE, Pittsburgh, Pa.

IOWA FARM FOR SALE. — 160 acres half improved, 12 miles from Keokuk, 3½ miles from railroad. Price $1500.

ILLINOIS FARM for sale, 160 acres, part improved, 2 miles from Metropolis, price $2000. These farms at the above prices are great bargains. For particulars address I. F. CHALLIS, Post-Master, Metropolis, Massac Co., Ill.

VALUABLE FARM FOR SALE IN VIRGINIA. 250 Acres, 6 miles from Fredericksburg, 1600 Apple, Peach, and Dwarf Pear Trees, Soil clayey loam, clay subsoil. Climate pleasant, and location as healthy as any in the United States Price $25 per acre. Intending to remove South. ABRAM VAN DOREN, Falmouth, Va.

Just Published:

THE YOUNG FARMER'S MANUAL.—By S. EDWARDS TODD. Containing Practical Directions for Laying out and Working the Farm, and how to erect Buildings, Fences, Farm-Gates, &c. The Work also embraces THE FARMER'S WORK SHOP, With full directions for selecting and using all kinds of farm and shop tools. The whole illustrated by 200 original illustrations. 1 vol., 16mo.; 459 pages. Price....................$1 25

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To Onion Growers.

A neat pamphlet of 32 pages, containing the condensed but plain directions of *Seventeen practical Onion Growers*, residing in different parts of the country; and embracing full directions for every item of labor from selecting seed and preparing ground, to harvesting and marketing crop. Nowhere else can so full, complete, and useful information on this subject be found. Sent post-paid, on receipt of 21 cents (or seven 3-cent stamps). Address

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For circulars address
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FLOUR AND GRAIN.

CHARLES HAIGHT,
(FORMERLY OF THE FIRM OF HAIGHT & EMENS,)
PRODUCE AND GENERAL COMMISSION MERCHANT,
39 Pearl street, near Broad,
New-York.
Refers to E. R. Cooper, Cashier Market Bank, New-York.

SEED BUCKWHEAT,
SEED BUCKWHEAT,
SEED BUCKWHEAT,
For sale by
R. L. ALLEN,
191 Water-street, New-York.

THE GREAT AUSTIN SHAKER SEEDLING STRAWBERRY IS BELIEVED TO BE THE LARGEST STRAWBERRY IN THE WORLD.

This remarkable Strawberry originated at our settlement in Watervliet, N. Y, four years ago, and owing to its immense size, many have been induced to visit our garden, and examine for themselves the merits of this berry; and we believe but one opinion has been expressed—that it is the greatest acquisition ever made to our small fruits. A gentleman, a practical horticulturist, on a recent visit to England, having seen all of their largest strawberries, says the AUSTIN SEEDLING is the largest strawberry he has ever seen. The AUSTIN is believed to possess, in a remarkable degree, all of the most desirable qualities for a favorite family or market berry. It was grown beside the Wilson's Albany Seedling last year in our garden, both receiving the same cultivation. The AUSTIN was twice as large as the Wilson, and quite as productive. The flavor is of the best, much like that of the wild or common field strawberry. All who tasted it decided it to be much superior to the Wilson. The following is a correct description: Plant of uncommon vigor, foliage very large, footstalks long and very stout, holding the immense fruit from the ground, fruit very large and broadly conical, color bright crimson, flesh rather firm, mildly acid, with a rich and high flavor, flowers staminate, in full bearing about the 25th of June. Some of the berries will measure over two inches in diameter; twelve picked from a bed without extra selection weighed one pound. The condition of our soil does not favor the best results for this remarkable berry, the soil being sandy and poor, never having been trenched. Amateurs visiting our garden and examining the soil where the AUSTIN is growing, believe that this monster may be increased one third in size in ground well trenched and properly manured.

We are aware that many new seedling strawberries have been offered to the public that have not given satisfaction, as they did not prove as represented. We propose to exhibit plants of the AUSTIN in full bearing, in pots, and berries in baskets, from the 15th June to the 4th July, at the following places: WM. S. CARPENTER's office, 468 Pearl-street, New-York; at the office of the *American Agriculturist*, 109 Water street, New-York; office of *Hovey's Magazine of Horticulture*, Boston; office of *Moore's Rural New-Yorker*, at Rochester; office of *Country Gentleman*, Albany; Farmers' Club of American Institute, New-York; and at Philadelphia. This will give all an opportunity to see and taste this remarkable berry; and if any, having ordered, do not feel satisfied after seeing for themselves, the money will be refunded, if desired, before the plants are delivered The plants will be sold for $4 per dozen, or $25 per hundred. Orders received immediately for plants to be delivered, commencing in August in rotation as ordered. All orders must be accompanied with cash.

We could give many certificates from gentlemen of undoubted integrity who have seen and tasted the berry, who fully indorse our statements, if we thought it necessary, but we prefer exhibiting the plants and berries as above described, that no one may be deceived.

Address CHAUNCY MILLER,
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Wilson's Albany Seedling. Hooker's Seedling!!

Strong, selected new plants of these desirable varieties, warranted true to name, carefully packed so as to insure safe transportation for any distance at $7 for 1000; $4 for 500, or $1 for 100, for sale by WM. RICHARDSON,
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Raspberry and Blackberry Canes—all the desirable varieties for sale.

Turnip Seed! Turnip Seed!!

J. M. THORBURN & CO.,
15 John-st., New-York,

Offer to the trade and others the following varieties of TURNIP SEED, all of which they warrant of the same superior quality as have heretofore given such universal satisfaction:

Early White-Dutch	per lb.	$0.75
Red Top Strap Leaf	do	75
Red Top	do	75
White Strap Leaf Flat	do	75
White French (extra)	do	75
Large White Globe	do	50
Large White Norfolk	do	50
Long White Tankard	do	50
Swan's Egg	do	75
Vertue's Long White	do	75
Green Globe	do	50
Waite's Eclipse	do	50
Yellow Malta	do	75
Yellow Finland	do	75
Yellow Stone	do	75
Robson's Golden Ball	do	75
Yellow Aberdeen	do	50
Long Yellow French	do	75
Dale's Hybrid	do	50
Improved Ruta Baga (American)	do	75
Skirving's do	do	50
Purple Top do	do	50
Marshall's Purple Top Ruta Baga	do	50
Bullock's Heart do	do	50
Dickson's Improved do	do	50
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Also,

Round and Prickly Spinach, each, per lb	50
Corn Salad or Fetticus, per lb	1 00
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Early Flat Dutch,
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Large White Flat,
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Purple Top Rutabaga,
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GARDEN, FLOWER and FIELD SEEDS, of all varieties.
CORN—King Phillip, Early Dutton, and all other varieties.
SEED BUCKWHEAT, extra clean.
Send for a Catalogue containing a full list of seeds and prices.
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RUSSIA OR BASS MATS, SELECTED expressly for budding and tying, GUNNY BAGS, TWINES, HAY ROPES, &c., suitable for Nursery purposes, for sale in lots to suit by D. W. MANWARING, Importer,
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Remarkable Success!

As the reports come in from the different parts of the Union where

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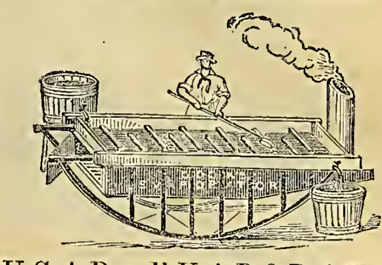


SUGAR EVAPORATOR!

FOR MAKING SORGHUM AND MAPLE SUGAR,

was used last season, its success in the actual manufacture of Sugar is fully demonstrated. The certificates given below are but a small part of those received during a singe week.

Read Carefully.

No other Evaporator has yet made Sorghum Sugar Successfully.

BLYMYERS, BATES & DAY, Manufacturers,
Mansfield, Ohio.

From Hon J. M. MILLIKIN, Member of the Ohio State Board of Agriculture.

Mr. Millikin bought a No. 4 Copper Pan for boiling Maple Sap last Spring, and expresses his opinion as follows:

"IT IS ENTIRELY TOO GOOD FOR MY USE. I bought it to make Maple Molasses, but the Pan, by its remarkable yet scientific defecating arrangement, so thoroughly deprives the Syrup of its gummy or glucose matters, that before I was aware, the whole mass was hurried into Sugar, and I am free to say that the Sugar was the most perfectly grained and finest colored Sugar I ever saw. Owing to this beautifuly defecating principle in the Pan, I have no doubt it will be equally successful in making Sugar from Sorghum or any other saccharine juices."
Hamilton, O.

◆

MANSFIELD, Ohio, May 13, 1860.

MESSRS. BLYMYERS, BATES & DAY: * * The Evaporator gave me perfect satisfaction. The Syrup from my best cane (kept separate) grained in three days' time, and made as beautiful an article of Sugar as any New Orleans JOHN REED.

◆

DEFIANCE, Ohio, May 11, 1860.

MESSRS. BLYMYERS, BATES & DAY: * * * I used one of your Evaporators last year with great success, and made 575 gallons of the thickest and best Syrup I ever saw. On the 1st of May I set away a large portion of it to grain, and now in ten days' time it has sugared, and is well crystalized and dry.

I also made a quantity of Syrup for Mr. Franks, a neighbor, who did not set it for Sugar, but it has gone to Sugar in the barrel. J. Q. BEATTIE.

◆

MESSRS. BLYMYERS, BATES & DAY: * * I made twelve barrels of very nice syrup, very clear and pleasant tasted. I sold all but one barrel, which I put away for my own use. During the winter I placed a portion of it in a warm room according to your directions, to crystalize and succeeded beyond my most sanguine expectations. The result has been a well crystalized and dry sugar. Had I known as much last fall as I do now, I would have sugared the whole lot. The Evaporator is all that is needed to make Sugar successfully from good Sorghum juice. You are at liberty to use this as you see proper,
Florida, Henry Co., O. ISAAC KARSNER.

◆

TECUMSEH, Michigan, May 20th, 1860.

MESSRS. BLYMYERS, BATES & DAY: It has more than met my expectations. My cane did not fully ripen yet I succeeded in making sugar, having found no difficulty at all in its graining. Your machine is all you represented it to be, and it is the only Pan that has had any success with cane juice in this neighborhood. Some of my neighbors have also made Cane Sugar on your Evaporator. JOHN RICHARD.

◆

The following is from one of Vermont's most noted and enterprising Agriculturists:

I am well satisfied with it, and shall have no hesitancy in recommending it to all sugar makers—(if I did not like it I should be the last one to recommend it to others). It boils faster, takes less wood, and makes better Sugar than can be done in any other way.
GEO. CAMPBELL, Westminster, Vt.

◆

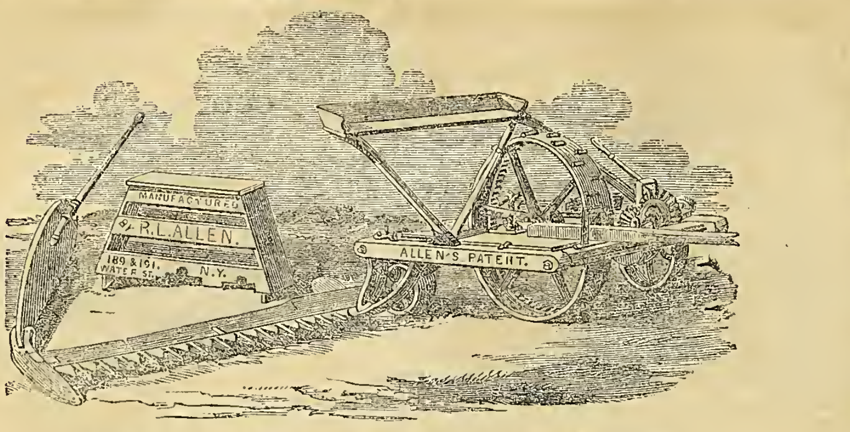
This is to certify that in the fall of 1858, I made 60 pounds of good Sugar from Sorghum, and I have ever since used Cook's Evaporator, and in every instance it has given me perfect satisfaction. I have now in my house several gallons of well granulated Syrup which will make a beautiful article of Sugar when I come to drain it. ENOCH PAINE, Springfield, Ill.

◆

MARION, Iowa, May 29, 1860.

MESSRS. BLYMYERS, BATES & DAY: * * I enclose you a sample of my sugar. I had no trouble in making it. I put nothing into it to cleanse it—this is just as it came from the Evaporator—it has not been reboiled. Yours
O. N. BRAINARD.

"I had no trouble in making sugar, a sample of which I send you." O. N. BRAINARD to *Ed. of Prairie Farmer*, Chicago, Ill.
"The Sugar received is excellent—beautiful crystals."—Reply of Editor of *Prairie Farmer*.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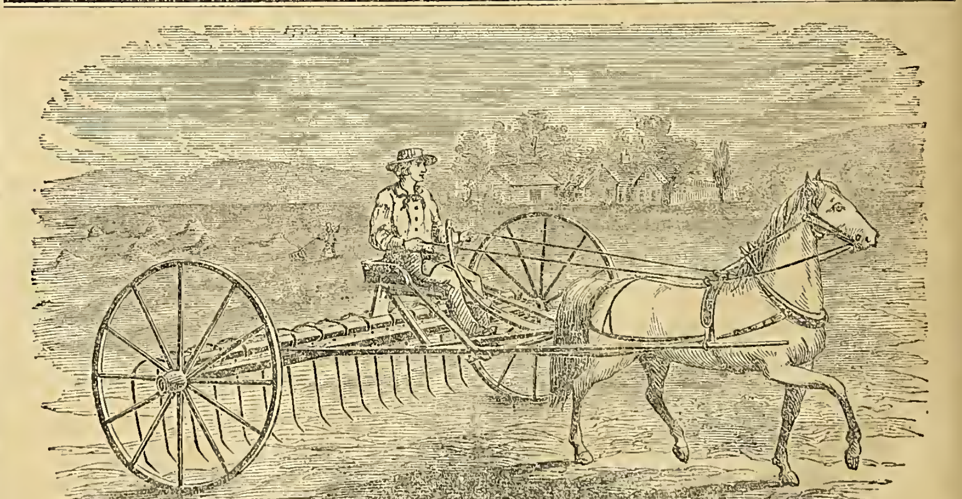

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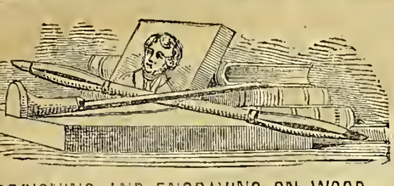

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At my own cost I visited Europe, selected the Bees and returned with as pure as there is in the world. Another party, at the expense of the U. S., likewise went. The Bees for the Patent Office arrived dead—of those purchased on his private account, a portion arrived safely. It now appears that I, a poor man, shall not be allowed to sell my Bees without his permission—(see June Agriculturist.) "*Confer a favor by demanding to see a bill of sale from me.*" Mr. P. offered me $5 for each of my orders when the money was paid. Generous, is it not? I answered not, content with my own business, but which has been materially injured since the said "Caution" was published. *I may find a remedy hereafter for this most cruel and unjust attack.* I now say to you, Mr Editor, as well as to your readers—that I *know* my Bees to be as pure as there are in Europe. I am now hatching most beautiful Queens daily at my new isolated Apiary, (no common Bees within one mile,) and only await, before commencing my deliveries, the certainty of their impregnation by Italian drones. Those on my books will please bear with me a short time. Those who have ordered and are willing to take the risk of *pure impregnation* can have the Queens, &c., immediately. Gentlemen sending 12 cts. to pay postage, will receive a few Bees as a sample by mail. Queens, &c., sent by express for $10.

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A Mean Imposition by Postmasters.

A REQUEST TO ALL SUBSCRIBERS.

On page 154, May No., we briefly alluded to the fact that certain Postmasters had lent their influence to a Philadelphia humbug. Since then we have received from sundry subscribers copies, of lottery circulars, money-making schemes, land enterprises, and, worse than all, if possible, small pamphlets with obscene cuts, sent out as "specimen pages" of a book published in Philadelphia. These several articles have been received by subscribers *closely folded in their regular copies of the* AGRICULTURIST, where they have appeared to have been placed by the publisher of this journal. We have been written to, to know whether we really endorsed these several schemes, as the sending them out thus would appear to indicate.

This is a downright, mean imposition, both upon the subscriber and the publisher. The objectionable documents must have been placed in the paper by direct act, or by the connivance of certain postmasters, or their clerks. We can not judge how extensively the practice has been carried on, as we know not how large a proportion of those who have received them, have taken the trouble to notify us of the fact. We shall spare no efforts to ferret out the offenders, and if they do not lose their official positions, as one at least has already done, we shall have less faith in the integrity of the men at the head of the Department, than we now have.

We wish here to say to all our readers, that we never, for any consideration, allow any advertising bills, circulars, or other documents of any kind, good or bad, to be inclosed in copies of the *Agriculturist.* And we ask, as a special favor, that each and every subscriber who may receive any thing of the kind folded up in a copy of our paper, would make a note upon it of the time and place when and where it was taken out of the post office, and promptly forward it to us, with particulars, and give us any practicable aid in ferreting out the guilty parties.

JULY SEED PREMIUMS.

ROOTS! ROOTS!! ROOTS!!!

FILL UP THE VACANT SPOTS.

"On the Twenty Fifth of July,
Sow your Turnips, wet or dry,
If it don't come on Sun-di."

So runs the old adage. Rapid growing varieties may be sown as late as August. The slower growing kinds should be put in early in July, or before.

On every farm and in every garden there are now some vacant spots, which will run to weeds if not used. In all these places scatter turnip seed, and instead of weeds, get a fine lot of turnips, both for the table, and for Fall, Winter, and Spring feedings. They will cost but little time and trouble.

We have some seeds of three of the best kinds of turnips, which we now offer as *premiums* to those who will procure and forward new subscribers. Viz.:

(No. 71) Long White French Turnip, as improved and grown by J. E. Macomber, Newport Co, R. I. This we have found the best table turnip, and the best keeper we have ever known. May be sown from June 1st, to August 1st. (See page 167.)

(No. 17) Red Strap-Leaf Turnip—a good turnip, and the quickest growing kind we have ever raised. It may be sown at almost any time from April to August, and comes quickly to maturity.

(No. 6) Ashcroft's Swedish Turnip—one of the best of the Swede turnips or rutabagas. May be sown from June 1st, to July 15th.

TERMS OF THE PREMIUMS.

To any person now sending a new subscriber, and $1, we will present, when desired, a *post-paid* parcel containing *one-eighth of a pound* of the seed of the above turnips (a part of each kind.) This with careful sowing, will suffice for 40 to 50 square rods, and yield from 50 to 200 or more bushels of turnips, the amount of crop will of course depend upon the goodness of the soil, the time of sowing, and the Autumn weather. The seed we will send post-paid except to the Pacific Coast and Canada. When to go to either of those localities, the recipient will need to send 7 cents extra postage for each half ounce of seed desired. (N. B.—If new subscribers are sent in as members of old or new clubs, and at club prices, the receiver of the premium will be expected to forward the postage on the seed, viz., 12 cents, if the full two ounces are desired.)

In addition to the above, an extra half ounce will be presented to the new subscriber himself, if the usual post-paid (3-cent stamp) envelope be provided for sending it in.

Premium Notice—Special.—When names are sent in on which any premium is desired, the sender should always give plainly the *number* of the premium expected. When this is not done, of course our clerks can not forward any premium, as they do not know what to send. This will explain the non-reception of premiums in a few cases which have already occurred.

New Premium--Portable Barometer.

It will be seen by reference to page 219, that our premiums for subscribers obtained for Vol. XIX (1860), are still open, so that those who have not yet completed their lists can still do so. It will be understood that these premiums are limited only to subscribers for the complete volume; that is, all names obtained at any time during the year, for the entire volume of this year, may be counted, in making up a list of names for a premium. We can not, of course, add together a few names obtained during *different* years, and count them in one list. ...Two half year subscriptions may be counted as one whole year.

The New Premium (No. 28) is worthy attention, viz.: *Kendall's Aneroid Portable Barometer.* Upon the strong recommendation of Prof. Silliman, of Yale College, we purchased one of these instruments several weeks since, and have very frequently compared it with a costly standard mercurial barometer at Blunt's establishment. We find it remarkably accurate, and from what we have seen of this and other instruments of the same kind and manufacture, we are prepared to recommend them. The state of the atmosphere is shown by means of springs instead of by the troublesome mercurial column and cup, so that it is easily carried in any position, and is not in danger of getting out of order. A barometer indicating approaching changes in the weather, is almost as valuable to the farmer, as to the mariner, and we believe most farmers would find $10 well invested in purchasing one of these instruments. We shall keep an extra instrument or two on hand for premiums, and to dispose of to those who can not get them more conveniently from dealers.

CLUBS

Can at any time be increased, by remitting for each addition, the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will, of course, be sent to added names.

American Agriculturist.

(DISTINCT ENGLISH AND GERMAN EDITIONS.)

A THOROUGH GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; IN-DOOR and OUT DOOR work around the DWELLING; care of DOMESTIC ANIMALS &c. &c.

A full CALENDAR OF OPERATIONS for the season is given every month.

FOUR to FIVE hundred or more, Illustrative ENGRAVINGS will appear in each volume.

Over SIX HUNDRED PLAIN, PRACTICAL, instructive articles will be given every year.

☞ The matter of each number will be prepared mainly with reference to the month of issue, and the paper will be promptly and regularly mailed before its date.

The Editors and Contributors are all PRACTICAL, WORKING MEN.

The teachings of the AGRICULTURIST *are confined to no State or Territory, but are adapted to the wants of all sections of the country—it is, as its name indicates, truly* AMERICAN IN ITS CHARACTER.

The German edition is of the same size and price as the English, and contains all of its reading matter, and its numerous illustrative engravings.

TERMS—INVARIABLY IN ADVANCE.

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Ten or more copies one year	80 cents each.

An extra copy to the person sending 15 or more names, at 80 cents each.

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Subscriptions can begin Jan. 1st, July 1st, or at any other date if specially desired.

The paper is considered *paid* for whenever it is sent, and will be promptly discontinued when the time for which it is ordered expires.

All business and other communications should be addressed to the Editor and Proprietor,

ORANGE JUDD, No 189 Water st., New York.

AMERICAN AGRICULTURIST,

ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN —WASHINGTON.

ORANGE JUDD, A. M.,
EDITOR AND PROPRIETOR.

ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE.
SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 8. NEW-YORK, AUGUST, 1860. [NEW SERIES—No. 163.

☞**Office at 189 Water-st.,** (Near Fulton-st.)
☞**Contents, Terms, &c., on pages 252-56.**

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The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs.

August.

"The fervid splendor of thy mid-day sun
With wonder strikes me, though its fire I shun.
I love thee most, whene'er thy potent rage
Or Autumn's breath, or vernal gales assuage.
Though Nature pant beneath thy noontide power,
How sweet the freshness of thy evening hour'
What time the night, throughout the gelid air,
Veils with her sable wings the solar glare;
Then loves the eye that shrunk before the day,
To drink refreshment from the moon-pale ray;
When modest Cynthia clad in silver light,
Expands her beauty on the brow of night,
Sheds her soft beams upon the mountain side,
Peeps through the wood, and quivers on the tide."
DELILLE.

Hot! Hot!! The whole air seems aflame, and man and beast seek the grateful shade whereever it can be found. You can see the heat quivering along the fences and the roofs of buildings, like the breath of a furnace. A dreamy haze hangs over field and forest, and mingles with the skies. Distant outlines loose their distinctness, and the softened sunlight bronzes every object where it lies. The breeze is fitful, coming up between awful pauses of silence, as if the pulse of Nature had ceased to beat. Look out over that broad expanse of water. Not a ripple is visible to the furthest shore. The sails flap idly against the mast as the boat rolls in the lazy swell of the sea. Not a sea bird lifts its wing; the white gull no longer skims the air, and the fish hawk slumbers upon his perch in the dead oak that looks out upon the waters. Even the bees are still enjoying their siesta upon the thistle down, and now and then at long intervals, a shrill whirr—a tread—a hum—a tap is heard through the dry leaves, in grass and bush, as insect, animal, or bird, rouse a little from their noontide sleep.

The mood of Nature is catching, and we will seek the shade while we rest from the labors of the hay field not yet quite cleared of its burden of grass. No great burden, say you, after this long drouth. It is true the hay harvest has been delayed all through the north for want of seasonable showers, and in the larger part, the crop is light, varying from two thirds to three fourths the usual yield. Not one farmer in fifty has stored his usual quantity of hay. But the principle of compensation runs through all the arrangements of Nature, so that we may have occasion for thanksgiving whatever our losses may be.

In short hay crops like the present, it is always observed that the hay is of better quality, and seems to spend better in feeding than when it is of ranker growth. There is probably some reason for this popular belief. There is no doubt that grass grown in the open field is much better than that which grows under the shade of trees. And in the seasons of abundant rains, when the grass grows so large, it is quite probable that it does not have sunshine enough to perfect all its nutritious qualities. It may be true in this season that three-fourths of a tun of hay will contain as much aliment as a tun in a wet season. Then it is a noticeable fact that in the years of a short hay crop, we have other compensations. The lack of rain in May and June is almost always made up by abundant rains in the following months. This makes an abundant corn crop, and fodder enough to make up the lack of hay. The after feed is also abundant, so that at the close of every season, if we take all the products of the farm into the account, the weather would not make much difference in the aggregate yield of each year. Especially is this the case where a great variety of products are cultivated.

In years too cool for corn, the great grain staple of the country, wheat, rye, and oats are generally of better quality than usual, so that if corn fall off a quarter, the deficiency is made up in other grains. Dry Summers are usually followed by wet Autumns, which are particularly favorable to the tap roots. The carrot makes more than three fourths of its growth after the first of this month, and will continue to grow until the ground freezes. Beets, parsneps, mangel wurzels, and turnips, also grow late, and where these roots are cultivated, the farmer has an ample resource for a short hay crop.

Seasons of excessive drouth are said to have an ameliorating influence upon the soil—and the opinion seems to be well founded. The tendency of excessive rains is to wash the mineral constituents of the surface soil downward beyond the reach of the roots of ordinary farm crops. Manures, especially in loose porous soils, work downward, and a fraction of the soluble portions are lost for present use. Lime is found to work downward quite rapidly, and for this reason is best applied upon the surface. This downward tendency of fertilizing material is pretty conclusively proved when we come to plow a field ten inches deep, that has usually been plowed but five or six. The breaking up of the old hard pan enlarges the pasture ground of the roots, and brings a great deal of new aliment within reach.

The drouth in part performs the office of deeper plowing. The water line sinks deeper in all cultivated soils, and the air pushes down after it to occupy the space vacated by the water. Of course, moisture must circulate through all this aerated soil; and as the ordinary supplies are cut off from above, they must come from beneath by capillary attraction and evaporation. The theory is, that fertilizing materials are brought up in the water from the storehouse beneath. Every thing that the water will hold in solution is thus brought nearer the surface. However this may be, the fact is frequently remarked that a season of drouth is usually followed by one of more than average productiveness. Then again, in years of short crops the price of all farm produce is usually higher, so it often happens that the amount realized is larger than in years of plenty.

There is much less occasion for complaint than the family of grumblers suppose. Indeed we suspect that if they could see the whole bearing of what they term ills, upon their own interests, their occupation would be gone. We sometimes have unseasonable frosts in June, doing great damage to the wheat and other crops. Such a frost visited a large district in the Ohio valley last year, and it was thought that the wheat crop would be a total failure. But it is now conceded by intelligent wheat growers that these frosts destroy insects, particularly the midge, and remove one of the greatest hindrances to the cultivation of this indispensable grain. We have, in a circle of years, all that variety of seasons which, on the whole, is most favorable to the production of food and raiment for the race. Even the ills and disappointments of the husbandman will be found in the end to advance his interests if he make a wise use of them.

"All Nature is but art unknown to thee;
All chance, direction, which thou canst not see;
All discord harmony not understood;
All partial evil, universal good."

Whether we can see it or not, there is a bebeneficent Providence above the drouth, the frost, and all seeming evils, using these untoward agencies to promote the comfort and happiness of all His creatures

Calendar of Operations for August, 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the North, later for the South.

EXPLANATIONS.—*f* indicates the *first*; *m* the *middle*; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

With August the heaviest farm work of the year closes. The plow and the cultivator have been succeeded by the reaper and mower, and these have completed their task, or are rapidly securing the ripened harvest. There is no time to be lost if the hay and grain are yet in the fields. Grass left to pass out of bloom and to ripen seed, becomes hard and woody, more like 'browse' than the sweet and tender stalk so well relished by stock, and so well fitted for their Winter nourishment. Grain cut when each stroke of the cutting blade shakes out the fully ripened and best kernels, is wasted in the gathering, and less valuable than if secured earlier.

When the harvest is completed, the first work should be a general clearing up and improvement of the fields for next year's cultivation. Draining, stump pulling, removing stones, rooting out hedge rows, reclaiming waste land, or fencing, will profitably employ many days on most farms. Now too, while the mucky deposits are comparatively dry, there is opportunity to secure material for manure to be worked over at leisure.

The roadsides where noxious weeds are ripening their seeds should be neglected no longer. The turf that may be collected while plowing out the weeds, will, if added to the manure heap more than repay the labor. Such labors will fully occupy the time before fall plowing commences.

Barns, sheds and other buildings where hay and grain are stored, should have free ventilation. Repair whereever necessary to exclude rain. Keep the barn floor free from 'scatterings.' Thresh out and clean gleanings from the grain fields. Exclude fowls from the floor or the hay mow—they add nothing to the cleanliness of the winter feed. Construct proper drains to carry the wash of the yard to the manure cistern, or to distribute it over the fields—the roadside is fertile enough without enriching it from this source.

Bushes and young sprouts left when mowing, should be rooted out. Tear out all hedge rows, or if time can not be taken for this, level them with the ax and bush hook.

Butter to be packed for storing or transportation, needs extra attention during the sultriness of dog-days. Keep the milk room cool and well ventilated, and remove everything from the neighborhood of the dairy that would cause an unpleasant effluvia. Observe scrupulous cleanliness, and frequently scald utensils to keep them sweet.

Cattle—Keep them in good condition by supplying deficiency in pasture with cuttings from the soiling patch. Allow them free access to water. If any show symptoms of disease, separate them from the herd at once.

Cellars—Give free ventilation and allow nothing to decay there.

Corn if properly attended to during the season, will not be much troubled with weeds now. Plowing among the rows will be injurious by breaking the roots. If any cultivation is needed let it be near the surface, with the hand or horse-hoe.

Draining—Improve the comparative leisure after haying and harvest, by reclaiming swamps which are now dry, and by laying tile or stone drains where needed. If there be not capital enough to bring all the land to high cultivation by this and other improvements, sell half the land and lay out the money on the remainder.

Fences—Erect new lines of permanent fence, using stones from the land if they can be obtained. Remove those around which hedge rows have sprung up, if the bushes can not be subdued otherwise. Keep all in good repair, especially about pastures.

Forests—Now is a good time to cut away the forests to increase the tillable land. After felling and trimming up the trees, draw out the heavy wood with oxen and spread and burn the brush, m, l, to prepare the ground for Winter wheat or rye.

Gleaning—Pass over the wheat and rye fields with the horse-rake after the harvesting, and secure the scatterings. This is more economical than to turn in cattle and hogs, which will glean but imperfectly.

Grain is safer when threshed and stored in the bin, than exposed in the stack to the depredation of rats and mice. Thresh early, and market as soon as remunerating prices are offered. Secure granaries from vermin. If weevil appear, fumigate with sulphur.

Hay—Cut, ff, any remaining until now. Coarse wild grasses unfit for feeding are valuable for bedding and manure. Secure salt marsh hay and sedge, m, l, during the neap tides of this month, and draw to the sheds, or stack upon upland.

Health—Hot weather is not necessarily unhealthy. Excessive fatigue, neglect of cleanliness, want of ventilation in sleeping rooms; improper food and more frequently exposure to drafts of air when heated, are the causes of diseases incident to the season. Temperance in eating, drinking, and working, cleanliness of house and of person, and care to avoid exposure, will do more than pills or powders to preserve health.

Horses keep in better condition for work in well ventilated stables with regular feeding, than turned loose in unshaded pastures to be tormented by swarms of flies. They may be turned out at night and put up in the day time. Keep their legs free from the eggs of bott flies. Do not overheat breeding mares suckling foals. Accustom colts to be handled while young.

Insure barns filled with the year's produce and other outbuildings as well as the dwelling. A single stroke of lightning may otherwise sweep away the whole.

Manures will soon be needed for the fall plowed grounds. Turn every source for their manufacture to profitable account. Fork over the compost heaps under cover, to prepare them for carting out. Good and profitable soil culture commences in the manufacture of an abundant supply of plant-food. Read the "Scientific and Practical Talks on Manures," now in course of publication.

Meadows—A top dressing of well composted manure applied to thin spots shortly after mowing, will serve as a mulch to protect the feeble roots, and will give a vigorous start for fall feeding. Keep stock from mowed fields until the grass has a strong start; it should not be fed too close. Remove rocks by blasting or sinking, and take out all bushes, sprouts and briers.

Millet or Hungarian Grass—Cut for feeding green to stock, or for curing for Winter use. If intended for hay, it should be cut before the seed ripens.

Muck—Draw out as large a quantity as can be used in composting with stable manure, and for saturating with the drainage of the stables, cattle yards and sinks. Store it in a heap near the barn, to be used as wanted. Exposure to sun and air will prepare it for use.

Oats—Complete harvesting as soon as sufficiently ripe. The straw well cured, but not burned up by sunshine, is worth more for feeding than poor hay.

Pastures—Allow no fields to be fed too closely. Pastures are 'run out' quickly by this process—unprotected roots are burned up during drouth.

Potatoes—Harvest early sorts, and prepare the ground for fall sowing. A crop of strap leaved turnips, or late cabbages may be secured in favorable locations.

Poultry may be allowed to run at large as soon as the grain fields are cleared. They will fatten upon the scattered grain, the grasshoppers, and other insects.

Root Crops—Run the cultivator between the rows sufficiently often to keep weeds down and the soil light. Thin the turnips sown last month. Dust with soot, plaster or ashes to drive away the turnip fly.

Rye—Harvest, ff, any remaining. Plow ground for fall sowing, next month. If sown too early, the growth will be too rank before Winter. Plow deeply, bringing up, say an inch of the subsoil.

Seed Wheat and Rye—The earliest and best portions of the field should be left to ripen fully, and harvested separately. Remove all weeds from the swaths before binding. In threshing, which should be done with the flail, strike long enough to beat out not more than two thirds of the grain, which will be the plumpest and best part. The remainder can be threshed clean afterward.

Sheep—Give good range of pasture, separate males from the ewes, and turn the lambs by themselves or with the yearlings, to give the ewes a chance to recruit. Examine the udders of the ewes when weaning their lambs, to prevent their becoming caked. Salt freely, and apply tar to their noses to repel the fly. Read "Sheep Husbandry," on a subsequent page in this number.

Swine—Those kept in the pens should have grain sufficient to keep them growing and to prepare for early fattening. Late pork usually brings less per lb., and requires more feed to make it. Allow them a liberal amount of green food. Pea vines with the fruit, are much relished by them.

Timber—Improve spare time this month in cutting building, or fencing timber for future use. It is a favorable season of the year for its durability.

Timothy sown by itself this and the first of the following month, will, under ordinary circumstances, give a good yield next season. Many successful cultivators prefer this to sowing with Winter grain. If the latter be done, the following month, or early Spring is preferable. Use from eight to twelve quarts of seed per acre, according to circumstances.

Tobacco will need cutting, ll, in some localities.

Turnips—Strap leaf or flat varieties may still be sown ff, among corn, after early potatoes, or on other unoccupied ground.

Water—The present is a favorable time for digging wells. Water reached now will probably remain permanent. If possible, have the barn and sheds supplied with drinking troughs to which the animals can have free access in Winter. Where good drinking water can not be obtained from springs or wells, filtering cisterns will be found of great value. We prefer water from this source to that from any other.

Wheat—Prepare grounds for sowing early next month. At the north it may be put in, ll.

Orchard and Nursery.

The abundant yield of almost every variety of fruit the present year has been most encouraging. Northern markets have generally been well supplied with good fruit, but the prices for the best sorts are still such as to keep them beyond the reach of thousands. There is yet abundant room for fruit growing. Now that such facilities are possessed for preserving fruits cheaply for Winter use, there is little danger of an over supply.

Budding is now in season. This method affords a ready means of securing improved varieties. Commence the work as soon as the bark will peel readily, and the buds are fully matured. Pears, apples, cherries, peaches and nectarines, are about the order in which the different trees are ready to be budded. Select in all cases strong healthy stocks and fully developed buds. By way of curiosity, a few specimens may be budded upon stocks differing from their own kind, as the apple, the pear, and quince, upon one trunk; the peach upon a plum stock, etc. For dwarfing the apple, choose the Doucain or Paradise stock; for the pear, the Angers quince stock. Label all budded trees plainly, and also keep a record of them. Round off stocks budded last year, ff, if not done previously.

Fences—Keep in repair. By a little neglect marauding cattle may in an hour destroy, or greatly injure, the choicest young trees.

Hoeing should be continued between the nursery rows and around the trunks of trees in the orchard as long as weeds continue to start, or when the surface of the ground becomes dry and crusted.

Inarching may now be performed upon many tree and shrubs.

Insects—Borers are busy in the apple and peach trees Examine frequently for their marks, and destroy them Late caterpillars abound in many sections, and the second crop of many insects infest the branches and leaves Apply whale oil soap and other suitable remedies.

Layering—The growth of the present season is now sufficiently advanced for this operation. Peg down f, m, stools and plants intended for propagation in this manner.

Overloaded trees should have the fruit thinned, or the branches properly supported by tying to stakes. Peaches, especially, are liable to have the branches split down from the trunk during sudden gusts of wind occurring at this season. Used forked sticks, with cloth, matting, or hay bands to prevent chafing.

Peaches, pears, and other fruit now ripening, if for market, should be picked before softening, to prevent bruising. They may be disposed of to better advantage if left to ripen in the care of the dealer. Have all baskets properly marked. There is nothing gained in the end by such deception as "topping" baskets of inferior fruit, with a better sort. "Honesty is the best policy."

Pruning—Complete this work this month, according to directions given in the previous number.

Seedling trees of all kinds should be kept free from weeds. Partial shading with screens made of slats, or with branches of trees is beneficial, particularly with evergreens.

Evergreens may be transplanted during the latter part of this month, though May is preferable. If done now, mulch and give plenty of water if drouth prevails.

Water seedling beds when needed, applying it at evening. Choice trees suffering from drouth should also be supplied. Dig near the tree, to a depth of six inches or more, pour in the water, cover the place with dry earth and apply mulching to retain the moisture.

Weeds are neither useful nor ornamental, keep them in their place, with their roots in the air, or better, bury them in the compost heap.

Kitchen and Fruit Garden.

As the season advances, the importance of this part of the homestead becomes more and more apparent, particularly if the labor of previous months has been well done. While enjoying a profusion of garden products, provision for the future should not be neglected. Many vegetables, as peas, beans, corn, tomatoes, etc., can be successfully preserved for winter use, by cooking and sealing up in air-tight vessels. The market gardener will find full employment in disposing of the ripening crops, and in preparing ground for future use.

Asparagus—Gather and clean any ripened seed, which may be sown at once, or kept until Spring. The beds now covered with a thick bushy growth, need little attention except to pull out rank weeds by hand.

Beans—Plant a few of quick growing varieties, ff, for late use of the pods for cooking or pickling.

Beets—Pull from the thickest parts of the bed for use as wanted. Thin to six or eight inches apart. Weed those sown last month. Mark by stakes the earliest maturing, to be saved for seed.

Blackberries—Pick as fast as they ripen. The New-Rochelle variety turns to a dark color several days before fully maturing, and should remain till it parts easily from the stem, to secure the highest degree of sweetness and flavor. Preserve in bottles, or dry them for future use. They may also be profitably manufactured into wine.

Cabbages, Cauliflowers, and Broccoli—Set out remaining plants for latest crop. Hoe often around former plantings. Sow seed, f, m, for Fall greens.

Celery—Set remaining plants in the trenches, ff. Water the bed thoroughly an hour or two before removing, and take up plenty of earth with the roots. Let the earth be slightly rounded up in the middle of the trenches, to prevent dirt washing from the sides into the crowns of the plants. Earth up former plantings when they have attained a vigorous growth of leaf and stalk.

Corn Salad—Sow, ll, for Winter use.

Currants and Gooseberries—Prune as soon as the fruit is gathered. Take out decaying and barren wood, and shape to a good head. The cherry variety bears most of its fruit near the ends of the branches, and will not bear severe cutting back. Other sorts need pruning to induce fruit bearing.

Cucumbers, Melons, Squashes and other vines need heading back after a sufficient quantity of fruit is set. To secure very large growth, thin out the fruit, leaving but two or three specimens. Boards or straw placed under melons will keep off worms, and add to the flavor of the ripening fruit. Turn the best specimens occasionally to ripen equally on all sides. Pick cucumbers for pickles as they attain proper size.

Espalier or Wall Trees.—Train the branches to their proper places while young, and cut out superfluous growth. Syringe the foliage during drouth.

Grapes—Train the leaders to the trellis. Leave foliage sufficient to supply the wants of the fruit. Where the ends of the bearing branches have been nipped off as directed in previous months, the side shoots will have started, and need to be shortened in, ff. They should not be disturbed after the berries have completed stoning and commenced their second swelling. Destroy worms and insects by hand picking.

Herbs—Complete gathering and drying, ff, m.

Hops—Pick during dry weather as they ripen, spreading until perfectly dry, when they may be put in bags and hung away for use.

Lettuce—Continue to sow and plant out for Autumn use.

Mushroom beds may be made, m, ll. Collect materials, f, m.

Onions—Gather for use or for market as they ripen. Handle with care to prevent bruising. Sow, ll, for "pips" to be left during winter for early summer use.

Peas for latest use may be sown in this latitude, ff. Clear ground from early crops and sow with turnips. The haulm or straw will be relished by swine.

Potatoes—Dig early sorts for market. Take them from the ground only as wanted, and keep them from exposure to the sun. The ground may be used for quick growing turnips, etc.

Preserving fruit, vegetables, etc., has been fully described in former numbers. Put up a full supply for winter use.

Radishes—Sow, f, m, for late use.

Raspberries—Remove bearing canes as soon as the fruit is gathered. Select the two, or at most, three strongest of the new shoots to the hill, for bearing next year, and cut out the others, unless wanted for setting out. Keep out weeds, and hoe in a little well composted manure or leached ashes. Head back canes that grow too rank—four or five feet is high enough.

Seeds—Collect as fast as they ripen, label them distinctly, put in boxes and keep dry, dark, and out of the reach of vermin. The year of raising should be marked on each package.

Spinage—Sow, f, m, l, for Autumn use, and ll, for a Spring crop. Scatter a little lettuce seed among it.

Strawberries—Read article on page 245. The runners of those intended for hill culture will require clipping now.

Tomatoes—Follow directions of last month. Look out for the tobacco worm, which feeds also upon this plant. If they are troublesome remove them by hand.

Turnips—The flat or cow-horn varieties may bring a good yield if sown, ff. For ruta bagas it is rather late.

Water from the sink, or the wash tub, is a good application for currant bushes, gooseberries, strawberries, etc.

Weeds add nothing to the beauty or the productiveness of the garden—add them to the manure heap.

Flower Garden and Lawn.

Although many of the early flowers have completed their blooming period, a large number yet remain, many of them of decided richness, which are gay with a profusion of brilliant hues. It has been truly remarked that the late bloomers exceed in beauty of color and outline, most of the early flowers. By exercising a little care and forethought, a fine succession of bloom may be kept up from Spring until late in Autumn. A judicious selection of varieties, sowing at different seasons, and nipping the young plants back to retard a portion of them, will accomplish this object. Especially is it desirable to have a goodly collection of those sorts which flower continuously, or at intervals during the entire season, as the verbena, fuchsia, geranium, petunia, monthly and remontant roses, etc. Many plants, blooming but once in a season, ordinarily would flower the second time were the seed capsules removed as soon as formed; the plant would then push into vigorous growth for a short time, and soon develop new flower buds.

Now is the time to note the peculiarities of new plants, their habits of growth, form and color of flower, etc., and to mark those specimens from which it is desirable to save seed. A small string or piece of bass matting tied to the plant indicates that it is intended for seed. As fast as others complete their blooming season, cut them down, if perennials, and pull them up if annuals, to give place to others. The value of a previous suggestion to have late sown plants in the vicinity of, or ready to transplant to spaces otherwise vacant during the remainder of the season, will now be seen.

Box edging should early receive its final clipping for the season, so that it may be prepared to withstand the frosts of winter.

Budding—This is a proper time to bud the rose, but the practice can only be recommended on a small scale for amateurs. The buds often die out in a few years. Oranges, lemons, magnolias, and many of the flowering shrubs may also be budded, ff, m.

Bulbs—If left in the ground until now, and still to be re set this season, lift and dry, ff. They may be set out, ll, or better during the latter part of next month, if they keep well.

Dahlias should now show a fine bloom of choice colors. Keep well tied up and prune where growing too thickly. One, or at most two good flower stalks, per root, is sufficient. Frequent waterings and a mulch about the roots in dry weather will benefit them. Cut away the dried flowers as fast as they lose their beauty. Watch for and destroy insects, especially the greyish worm which bores into the stalk and feeds upon its juices.

Fuchsias—A mass or bed of the different varieties, now in full flower, can not fail to please. We regard them as among the finest floral gems of the garden. They do well in a partial shade, which also prolongs their blooming season.

Gravel Walks—Strew salt over occasionally. It will assist in destroying both weeds and insects, and serve to unite or compact the gravel. Hoe or pull any weeds which persist in growing.

Hedges—Clip, f, m, unless it was done during the latter part of last month. Cut away from the top, so as to thicken up the bottom. Leave in good shape, as this should be the last shearing, especially upon evergreens.

Hoe often all cultivated grounds, walks, etc., removing the weeds and leveling with the rake. Even if there are no weeds, the soil should be stirred to keep it from crusting, and prepare it to absorb rain and dews.

Insects—Do not let them increase by a second crop, at this season. Even if they have done all their injury for the season, allow none to weave their cocoons and remain for a propagating stock another year.

Layers of many of the woody plants can still be made with a probability of their rooting before Autumn. Use wood of the present season's growth. Shoots laid down in early Spring, if well rooted, may now be severed from the main stock.

Lawn and Grass Edgings—Mow evenly when 6 to 8 inches high. Frequent cutting causes it to thicken at the bottom. A sprinkling of guano water, or liquid manure, after cutting, will cause the grass to start with vigor. New lawns may be sown, ff, adding a little winter wheat, or rye, to protect the roots during the Winter. Having used perennial Rye Grass with good satisfaction, we are prepared to recommend it. We have discarded the old directions to use a large variety of grass seed, and now prefer a single sort.

Mignonette sown, ff, will form fine plants for Autumn and Winter blooming in-doors.

Pelargoniums—Start cuttings, ff, m, for a winter stock to bloom in-doors. Thin out and head back plants to give them a good form.

Potted Plants require frequent waterings at this season. Loosen the surface soil occasionally, and remove weeds. This is the proper season to pot a stock for winter blooming.

Prune Shrubs and Trees upon the Lawn, or borders, if necessary, always using the knife sparingly upon shade trees, although where it is to be done, this is a suitable month for the operation. Almost any desired shape may be given to a lawn tree by heading back in one place, tying in another, and pinching elsewhere. Fantastic forms are sometimes given evergreens by shearing to the shape of animals or other objects.

Roses—Continue the oil soap mixture as long as slugs or aphides are troublesome. Early in the month is a proper time to bud roses. Layering may yet be done, using shoots of the present season's growth. Many of the Remontants are now in bloom the second time.

Verbenas and Petunias—Layer, ff, m, for Winter and Spring blooming in houses.

Water—Give to potted plants especially, and those newly planted out. If very dry, an application both morning and evening will be beneficial to those which absorb rapidly. It is better to mulch the ground before watering.

Weeds—Keep from the borders, walks, and also from growing among the grass upon the lawn.

Wild Flowers—Many of these are now in bloom. Note the desirable kinds and mark the spot where they are to be found to be transplanted at the appropriate season. The peculiarities of soil, shade, moisture, &c., where they grow naturally, should be borne in mind for future guidance.

Green and Hot-Houses.

As most of the plants are in the open grounds, there is little to do inside the houses this month. It will be well, however, towards the close of the month, to put every thing in order for the reception of plants, as a cold spell in September sometimes makes it necessary to carry the tender plants inside, and the houses are much more easily and safely cleansed, painted, whitewashed, glazed, etc., while empty. In extensive collections, some plants are usually left inside the house during the Summer, to have better control over sun and shade, heat and cold, dryness and moisture. These will require daily care, giving them plenty of air and frequent waterings.

A good supply of potting earth should be prepared, both for present and future use. It is better after having lain in the heap some months, hence a large stock should be provided. A good potting soil is made of 3 parts muck, or leaf mold from the woods, 1 part loam, 1 part sand, and 1 part old manure.

Budding—This is the proper month for budding most of the woody plants, particularly oranges, lemons, camellias, etc. Inarching may also be performed.

Callas—Repot, f, m, watering moderately.

Camellias—Complete repotting and bud, or inarch those plants which are to be changed.

Cuttings—A large number of plants should now be started by cuttings. A frame, in a somewhat shady position, is the best place for them. The soil should be light, well worked, and the plants watered frequently. Many cuttings which would not grow in the open grounds, can be successfully struck in this manner.

Geraniums strike very freely even in unprotected ground. Put in a good stock of the choicest varieties, especially the Tom Thumbs.

Grapes—Some of the early houses have already ripened their crops, and the vines want hardening off, by throwing open the doors and ventilators. Later plants need some pinching and watering. Watch the approach of mildew, using sulphur to check it.

Houses—Commence early to put them in order, before plants are brought in. Repair shelves and beds, glaze windows, cleanse the whole house thoroughly, have ropes, weights and pullies in working condition, look to the heating apparatus, and lastly paint those houses requiring it, being careful to empty from them all tender succulent plants at the time, else the poisonous gas from new paint will cause defoliation.

Insects—Keep in check as recommended under "Flower Garden." If they have established themselves in the houses, syringe thoroughly, and if not effectual, fumigate with tobacco.

Manure—Give in liquid form to plants growing in pots, especially to those of unthrifty growth.

Potting—This is the appropriate season for shifting generally, and potting off seedlings. Complete early, that they may become established before Winter. See that a good heap of properly prepared potting soil is in readiness, as large quantities will be wanted before all the plants receive their final change for the Winter.

Seeds—Collect as they ripen, and carefully label or plant according to their character. Calceolarias, cinerarias, sweet alyssum, mignonette, pansies, daisies, etc., may be sown now for winter blooming.

Tender Plants, and some of those intended for early Winter bloom should be taken to the houses, ll, before chilly nights come on.

Water—Give abundantly inside, and to pots in the border. Syringe the foliage and walls of the house both morning and evening, sprinkling the floors at the same time.

Apiary in August.

BY M. QUINBY.

When surplus honey in glass boxes is intended for market, it should be taken from the hive before any of the darker honey, made from Buckwheat, is mixed with it. Boxes that are only two thirds or three quarters full, are often worth as much as if finished with buckwheat. This, being put in last, will be on the outside, and the box will appear as if all of that quality For home use, unless it is desired to have it purely white, it may remain till the combs are finished—sealed up—before removing it.

Bees will collect buckwheat honey nearly all of this month, and where the crop is general, swarms may be expected occasionally from the 10th to the 25th. Where they do not have access to these flowers, they will perhaps add nothing more to their stores. The honey in such boxes as are only part full—cells not sealed—will be likely to be carried down into the hive. This should be removed at once, unless additions to their Winter stores are needed. Full boxes, of course, should be removed without delay.

When glass boxes are put on a hive, there should be a fair prospect, at least, of having honey stored in them. Weak colonies will often only go up into the boxes, and smear the inside with just enough propolis to injure its appearance another year. Moth eggs will not hatch in boxes of honey laid up for Winter, when kept sufficiently cool—a good cellar, if dry, will do—dampness injures the honey: keep dry even should the worms hatch. Watch for them, and smoke with brimstone on their first appearance......Divide any buckwheat swarm that may issue this month; give the half containing the queen to any stock that remains queenless; and return the other half to the parent stock. Particulars for the operation were given in the *Agriculturist* in August last year. Continue to place vessels filled with sweetened water about the hives through this month. Any old stock very much reduced by over swarming, or other cause, that has a queen, and is otherwise healthy, will probably need much assistance to recover strength. Lay some pieces of old refuse comb near the entrance, (if you have it,) to induce the moth to deposit her eggs there, instead of on the combs inside; they are much easier destroyed in this way than when in the hive....Where the buckwheat crop is not raised, hives are usually as heavy in the early part of this month as at any time: for although honey will continue to be brought in, the quantity is small, and it will be consumed about as fast as collected. Such stocks as are condemned, might as well be taken up now—it will often save such as are very weak from destruction by the moth.

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Cultivation of Celery.—H. R. Angel, M. P. Smith, Westchester Co., Pa., and others. Celery is mainly raised for late Fall and Winter use. Sow in drills about the middle of May, hoe and thin, and finally transplant in trenches eighteen inches deep, the last of June. Hoe only in dry weather, and begin to earth up the first of September, but put the last and principal banking about it just before frost. Draw in the branches and tie with soft matting to keep the earth from the heart. Harvest when perfectly dry, before hard freezing, and put in a cold cellar, or bury in *dry* soil, standing them upright, closely packed with two or three inches of the leaves out of ground. Spread a little straw, or lay boards over the plants for a partial protection.

Scientific and Practical Talks About Manures.....VII.

(Continued from page 197.)

MODE OF APPLYING MANURES.

The skillful breeder is careful to give his young animals a good "start." He recognizes the fact that if the young colt, calf, or lamb, be supplied with suitable nourishment to early develop large feeding organs, the animal will be better able to provide for its own wants afterwards. The same rule holds good in regard to plants. If the young wheat or corn plant be so nourished that large, vigorous feeding organs (roots) are developed at the beginning of its growth, these roots will gather food more rapidly for its future wants. For the same reason the manuring of *seed* is a subject of no little importance. All kinds of seeds contain, along with the germ, more or less of nutriment (starch, gluten, etc.,) to supply the first wants of the expanding roots. If there be a deficiency of food *in* the seed kernel, the roots will not be developed far enough to reach out into the surrounding soil where they can gather other food. Here is an important reason why, other things being equal, large plump seeds will yield a larger product than those which are small or shriveled. If a plump "meaty" kernel of wheat be put into the ground, the food it contains will nourish and develop long, strong roots, and these will in turn more rapidly gather large supplies of sap and food from the soil. But if, on the contrary, a poor shriveled kernel be planted, weak shoots will be developed, and a much longer time will be required for the plant to obtain abundant food from the soil. It is true that favorable soil and weather may sometimes conspire to produce rapid development of roots, and poor seed, small potatoes, or even the eyes of potatoes, may yield a fair crop. But this is not the common result. The largest, plumpest grain kernels, and large potatoes, should be selected for sowing and planting, for precisely the same reason that liberal supplies of nourishment are given to the young animal after birth, as well as to its dam before birth.

Let us apply the above to the manuring of seed. Manures are artificial supplies of food. The seed kernel has, at most, only a limited supply of nourishment. If we take three or four kernels of corn or wheat, and bruise them so as to kill their germs, and then place them in the soil around a single whole kernel of the same kind, we thus supply four or five times the usual amount of starch, gluten, etc., for the use of the germ of the one whole seed, and it is reasonable to conclude that its first growth must be accelerated; that the plant will start off more vigorously; that it will send off larger and longer roots in search of food from the soil; and that the after growth of the plant will be larger and more rapid. We see here a reason for always applying a portion of the manure used, directly to the seed. Suppose twenty five or fifty loads of manure to be mixed with a soil: unless the intermixture be far more thorough than is usual, or even practicable, a part of the seeds sown or planted, will fall into portions of the soil where it can receive no benefit from the manure, until it has sent out roots of considerable length. Other seeds will fall in direct contact with particles of manure, and these will be fed or stimulated, and take a more rapid start. This effect will be, in part, counteracted when the manure has been in the ground long enough to have become pretty evenly diffused by the water circulating in the soil. As a rule, however, we advise putting some manure directly, or nearly, in contact with the seed in the hill or drill. Where seed is sown broadcast, it should be previously coated with manure, by soaking in a strong manure water, or by wetting it, and then rolling it in, or dusting it with some fertilizer. This last method is usually advisable. If barn-yard manure be used, it is advisable to secure a strong liquid by leaching, or by taking drainings from the heap or manure cistern, and wetting the seed with it, drying it off with plaster, or even with dry soil. *The more manure of any kind you can get to adhere to each kernel of seed, the better.*

The use of tar with all kinds of seed is in vogue with many cultivators, and the practice is to be commended. Mix water with the tar to make it barely thin enough to use conveniently; then stir the seed up with it until thoroughly coated. Shovel it over with plaster, or, if this is not at hand, use dry soil. The coating of tar and plaster thus obtained will act as food for the growing germ, and the tar not unfrequently protects the seed from destructive insects. As a general thing, a mixture of equal parts of lime or ashes, and plaster, or even lime alone is advisable for drying the coating of tar. Most soils contain considerable quantities of undecayed vegetable matter, which the alkali of the lime or ashes will decompose and prepare for immediately nourishing the young plants. On wet, heavy, cold, or sour soils, it is always desirable to coat the seed with lime.

Manure water is the best soak for seed. Where this is applied, it is not usually advisable to add lime or ashes, except in very small quantity mixed with the plaster or dry earth, because the alkali will set at liberty the ammonia before the roots are far enough developed to appropriate it; yet in this case, if the soil be damp, it will generally retain much of the ammonia. On wet, heavy soils, the use of lime or ashes is always desirable. The alkali around the seed not ununfrequently saves it from fermentation and decay. When fine bone, (bone sawdust,) is obtainable, this is excellent for smearing over seed previously damped with manure drainings, or tar water, or even with simple water.

On fertile ground, where much manure is not needed, it is still advisable to use a little with the seed, for the reasons above given. The plants get a more vigorous *start*, and afterwards draw more freely upon the surrounding stores of plant-food already present. On poor land, while the first care should be to have manure enough near the seed to start it vigorously, additional supplies, mixed with the soil, generally are needed to afford constant food to the expanding roots. To sum up we may lay down the following

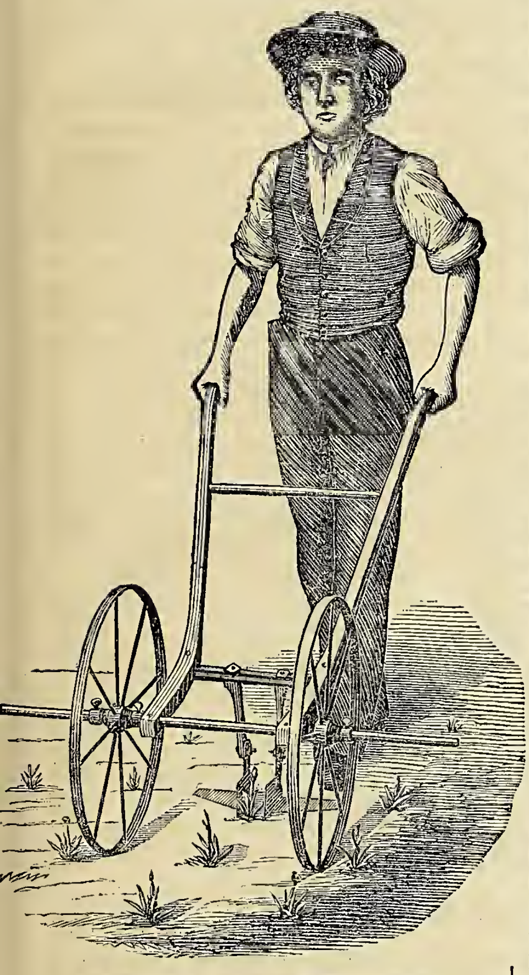
GENERAL RULES FOR APPLYING MANURES:

1st—For all kinds of soils put some fertilizer near the seed when it is planted or sown in open hills or drills, to produce rapid development of the first shoots.

2nd—When seed is sown broadcast, or drilled in with a machine, let the seed be previously well coated with some fertilizer.

3rd—On poor soils, in addition to the manure upon or around the seed, let there be additional supplies of manure mingled with every part of the surface to furnish future supplies of food to the expanding roots.

When practicable, it is better to make the gen eral application of manures for a considerable time prior to putting in seed, and to thoroughly mingle the fertilizers with every part of the surface soil. Manure scattered through the soil in lumps, gives too much stimulus to those roots coming in contact with it, while other portions receive little or no benefit. This causes a waste of the manure, and unevenness in the growth of the crop. The advantage gained by having the manure in the ground during several days or weeks prior to planting or sowing, is, that the circulating water or moisture tends to dissolve the soluble portions and diffuse them evenly through the whole, so that every seed may derive some benefit from it soon after germination.



Sedgwick's Improved Cultivator.

The accompanying illustration shows the general form, and mode of operating a new implement which we have recently tried to some extent upon carrots, turnips, onions etc. It has several good features. The wheels are placed upon a long axletree, and by simply loosening the thumb-screws in the rings upon each side of the two wheels, they can be brought close together, or be spread two or three feet apart, so as to track between rows any distance apart. The wheels are wrought iron, and the whole implement is so light that it can almost be raised at arms length, while it is strong enough for all practical purposes. The cultivating shares, of which there are five different forms, are so arranged that they can be used in pairs, or three at a time. They can also be elevated or lowered, and set apart or together, at pleasure, thus adapting it for almost all kinds of weeding. Taken altogether, it is an ingenious and very useful implement, and will be likely to come into general use, both in the garden and field. We find it especialy useful for carrots, onions, and turnips, as it can be run over the rows, cultivating on each side, while the sharp points of the shares, which project below, cut the ground so as to prevent destroying the plants themselves.

Shoe the Fowls.

The above is not a misprint for "Shoo the fowls," but means just what it says, viz., put *shoes* on the fowls. Domestic fowls would be of a great utility in a field of growing corn or potatoes, and especially so in the garden, if they could be kept from scratching up the plants. With a flock of poultry running among the vines, there would be no trouble from bugs. A long time since, we gave in the *Agriculturist* a plan for attaching a jointed spur to the back side of the legs of a hen, so that when she attempted to scratch, the false spur would catch in the ground, and throw her forward; she would thus speedily scratch herself out of the premises. That was considered a very ingenious arrangement, though not a very practicable one. But here is a remedy, both ingenious and practicable, and what is still better, it does not send the fowl away, but leaves her to gather the insects, and prevents her doing any harm with her feet. For the idea, we are indebted to the following paragraph, which we find in an exchange, credited to the Rural Intelligencer: "A friend of ours, boarding in the country, found his hostess one morning busily engaged in making numerous small woolen bags, of singular shape. Upon inquiry, he was informed that they were shoes for hens, to prevent them from scratching. The lady stated that it had been her practice for years to shoe her hens, and save her garden. These 'shoes' (I believe they are not patented) were of woolen, made somewhat of the shape of a fowl's foot, after which they were closed with a needle and sowed tightly on, extending about an inch up the leg. Our friend observed that some of the biddies, possibly conceited with their new honors, appeared to tread as though walking on eggs—particularly was this the case when, from the width of the shoe, one would conceive that their toes might be pinched."

Now is not that a capital idea? How easy it is to sew pieces of thin strong cloth around the feet of a dozen, or twenty, or fifty fowls, in the form of a bag, leaving it loose enough not to obstruct the use of the feet in walking and in roosting, but making it tight enough around the leg to prevent its slipping off. The animals may than be allowed to roam at large and gather grass-hoppers and other destructive insects. We shall put the plan into immediate practice, and increase our stock of poultry—to the undoubted advantage of our plants, now infested with myriads of insect pests.

Agricultural Products of Long Island—Amount of Manures Used—Interesting Tables.

Two subscribers have complained of our recent article on the waste lands of Long Island, and "flings" have been thrown out by some of the newspapers. But no one has answered the arguments set forth, and we shall not waste words in responding. We readily acknowledge that many parts of the Island are exceedingly productive; indeed, here are some of the finest lands for field and garden culture in the world. There is abundant proof of this in the continuous stream of market wagons crossing the ferries to New-York City during a great part of the year. These come from all over the western 20 miles of the Island. An untold amount of produce is also taken from the numerous bays and inlets that line the North and South shores. The Long Island Railroad, running nearly through the center from East to West, though carrying to market but a small part of the produce, comparatively, does a large business in this line. Mr. J. I. Shipman, the head Engineer of the railroad, has furnished for the *Agriculturist* a statement of some of the operations upon the road. including the following:

Sent to New-York and Brooklyn in Railroad cars.

	1858.	1859.
Milk—(quarts)	3,221,145	3,197.910
Potatoes—(bushels)	171,149	163,373
Blackberries—(quarts)	60.879	100,245
Peaches—(baskets)	5.044	*no cr p.*
Hay—(tuns)	1,200	2.900
Fish for market—(pounds)	4,400,000	4,568,000
Sent from New-York by Railroad cars.		
Ashes—(bushels)	189,364	317.774
Horse Manure—(cart l'ds of 14 bu)	71,077	105.466
Guano—(tuns)	5,656	7 004

The greater part of the last three articles going on to the Island, is sent by boats to the harbors along the coast. Keeping this fact in mind, it will be seen from the following table that Long Island farmers buy and use manure freely:

Stable manure taken by boat from New-York, and sent by cars over the Long Island Railroad, reckoned in carmen's loads of 14 bushels each:

For year	ending	April 1,	1855	19,177	loads
..	..	..	1856	25,167	..
..	..	..	1857	39,102	..
..	..	..	1858	36,515	..
..	..	..	1859	71,077	..
..	..	..	1860	92,260	..

The fact that the amount sent to the same portions of the island, has been largely increased, from 19,177 loads in 1855, to 92,260 loads in 1860, is proof that manuring pays.

For the American Agriculturist

Loss of Queen Bees.

After much practical experience with bees, I conclude that more colonies are lost indirectly from the loss of Queens, than from any other cause. I will enumerate a few cases of loss resulting from this cause, which may be considered as primary. *First*—says farmer A to me; "I had a first rate hive last Summer—it was very full of bees; in fact, there were so many they couldn't all get into the hive, they clustered all over the outside the most of the season, and I thought they would certainly swarm; but, for some reason they didn't, and last Fall, (it might have been in Winter or early in Spring) I went out to see how they were getting along, and to my surprise, on lifting up the hive I found it full of honey, *but no bees*. This is what puzzles me: what became of the bees?"

It would doubtless require much time to convince farmer A, that the average duration of life of the queen is about four years—the average of workers is six months. He has "kept" bees upwards of twenty years, and has stocks ten years old, and the queen and bees must be at least as old, for, (in his opinion) she and a portion of the old bees never leave with the first swarm, as we know all writers say, because its "agin natur."

As he has asked the question, I will answer it according to the best of my ability, even should he think it some new-fangled notion. This stock of farmer A's, since it had cast no swarm, very likely had an unfertile queen—the queens frequently lose their fertility after the fourth year—or, the queen might have died from old age at a time when no eggs were in the worker-cells, so that they could not artificially rear a queen. There might, however, have been worker-eggs and a queen reared, but at a time when the drones were killed, so that she could not have been impregnated. Now, a stock destitute of a queen, or containing a queen either unfertile or unimpregnated, will soon dwindle away, leaving the hive well supplied with honey, as was the case with farmer A's.

Second—farmer A, has again made complaint—"The worms have completely destroyed the best swarm of bees I had." Why, farmer A, did you consider it the best or even *one* of the best of your stocks?" "Because," he replied, "it swarmed four times, and no other stock did as well, for none swarmed over twice." I am not at all surprised, that the worms took possession of the contents, for what was to hinder them or impede their progress. Certainly it could not be bees. Just think of it reader, four swarms of bees from one stock in one season! This decrease in bees is almost enough to render it worthless, even had not the moth-worm taken possession. Two swarms are enough in one season, from any stock, especially, when allowed to swarm naturally. I am aware that stocks occasionally cast three or even four swarms, and yet, so far recover by the next season as to go through the same routine of over-swarming again. It is almost always advisable to return all swarms after the second—which may be effected by depriving them of their queen or queens. This must be done soon after they swarm, or they will lose all instinctive knowledge of the parent stock. Instances of stocks recovering from over-swarming, and becoming populous, are extremely rare, especially where the bee-moth is lurking about. Stocks becoming reduced from over-swarming, are not the only ones that are destroyed by moth-worms—it occurs more frequently from loss of the queen. The old or oldest queen always leaves with the first swarm; therefore, the queen remaining after the stock is through casting swarms, is young, and being unimpregnated, must leave the hive to meet the drones or male bees. During her excursion she is liable to become lost, either by severe winds, or by being caught by birds, or more commonly is killed at once on entering a wrong colony. Colonies standing near each other in hives painted alike, are nearly as certain to be selected by the queen on her return, as her own; and in almost every such case she is instantly stung by the worker-bees, resulting in her death unless the colony is queenless; then, she will generally be kindly received. Should this be the result, or should she be killed by attempting to enter the wrong colony, it would make no difference, as far as that is concerned, with the stock from which she emerged. The now queenless stock would dwindle away in the course of a few months, even if not destroyed by worms.

The loss of the queen during her flight to meet the drones, is the cause of no queen being found in the parent stock, fifteen or twenty days after the issue of the first swarm. If but one swarm is cast, she may be seen in the hive about the eighth day after its issue. There may be exceptions, however, as she sometimes emerges from her cell sooner, and occasionally later.

In conclusion, I would advise all who wish to guard as much as possible against the loss of queens, which in the majority of cases results from the hives being placed too near each other, that the colonies containing young queens should be at least six feet apart. Such colonies, are the stocks that have cast swarms, and all swarms after the first that issues. Sometimes first swarms contain young unimpregnated queens, but as such instances are rare, nothing need be said here concerning them. It is better, if room can be spared, to have all colonies two rods apart, placed under trees, on the North side, and facing the South-east. The stands should be movable, so that colonies can not communicate with each other, without first rising on the wing. In this way, robbing may, in a measure, be prevented, as the temptation is greatly diminished. The best stand for movable comb hives is constructed thus:—Take four pieces of board—two, 14 by 8 inches, two, 20 by 8 inches, and nail the ends firmly together, forming a rectangular box. This stand is simple and may be very cheaply made.

M. M. Baldridge.

Niagara Co., N. Y., July, 1860.

Inaugurating a Queen Bee.

The incidents attending the inauguration of a Queen among bees, are less ceremonious, perhaps, than a similar transaction among men, yet to the observing naturalist they are full of interest. An account of one of these events, happening the present season, was described in a private letter, recently received by Samuel B. Parsons, and it interested us so much, that we solicited the privilege of making the extract below. Mr. J. H. Pierce of Montgomery County, Ohio, received an Italian Queen bee from Mr. Parsons, and Mr. Langstroth happening to be in the neighborhood, was requested to undertake the ceremony of inaugurating the new-comer as royal mistress over a native stock. It will be seen, that the republican tribe did not at first submit quietly to the usurpation. "....He (Mr. L.) first took away the Queen from a colony, driving off the bees that followed her, and when they had become uneasy and anxious from the loss of their Queen, he presented the new Queen at the entrance of the hive, in which were the bees which had adhered to the comb, and those that had returned from abroad. She entered immediately, but was instantly surrounded and enclosed by a knot of bees, and uttered a shriek of alarm, which caused Mr. Langstroth to disperse the bees and catch her, for fear she would be smothered. He then introduced her in the wire cage, in which she had been sent, and hung her in the hive, permitting the whole swarm to return. He left her in this way perhaps half an hour, and as they appeared to be feeding her, then released her among the bees, who appeared to be now more willing to receive her. This was about 12 o'clock. After dinner, at 3, Mr. Langstroth started home. Mr. Rossel, the bee-keeper, after this went to the hive, took off the honey-board, and found the Queen on the bottom of the hive, running as fast as possible, the bees pursuing her, and she squeaking. She ran out in front and took wing, but as she rose above his head, he fortunately caught her, and clipped her wings. He then sprinkled the hive with peppermint water, and as the bees in a few moments appeared quiet, gave them the Queen again, and they received her very peaceably. The next morning, he examined the hive, and found her upon the comb "all right." Mr. Pierce writes further: "We now attribute the trouble to the fact of Mr. Langstroth's cleansing some wax from his fingers with *turpentine*, just before he handled the Queen, and they retained the scent, although he washed them afterward in clear water. We have found, if bees are robbing a hive, and the owners are dispirited, that a little whiskey, sprinkled upon the floor of the hive, so excites and enrages them, that they at once fight furiously, and kill every robber they can lay hold of. The turpentine doubtless has the same effect, and the queen being scented with it, was very offensive to the bees. I have entered into this detail, presuming you will be interested in our method and success, and also that you may have additional proof of the delicacy of the bees' olfactories, and the danger of offending them in this regard....."

Diseased Bees.

To the Editor of the American Agriculturist.

I wish to inquire in reference to the bees wintering the past season. We commenced the Winter as usual with our bees, covering each hive with a separate box. But almost as soon as the cold weather commenced, the bees began to leave the hive, and fall down on the ground in front. They discharged their fæces on the inside of the hive until all was completely covered. Nothing that we could do seemed to alleviate the disease. The loss of bees in this section has been very great, although the weather has not been near as cold as many winters before when our loss would not amount to anything. Our hives are well ventilated both at top and bottom. Now we feel anxious to find out what is the cause.

Jackson Co., Mich. J. Butler.

Remarks.—Notwithstanding the moderate weather, the bees were probably too cold. We know of but two causes to induce this trouble, *viz.*; foul brood, or too much honey stored. To winter well, bees *must* have empty cells, into which a portion of them may creep in severe weather. Ordinarily, there are enough left by the brood that matures after the honey fails in the flowers. When a great portion of the brood fails to mature and leave the cells in consequence of disease, it prevents close packing. Sometimes a colony pillages honey from another until their own combs are too full. During some seasons, the flowers may yield honey so plentifully that the bees fill their combs until there is little room for the bees except a thin layer between the combs—this, if the complaint was general in your section, was the probable cause. The colony in such cases must spread over a large space in the hive; they can not maintain the same degree of heat, and they consume more honey, the accumulation of fæces is much greater, their bodies become distended beyond endurance, they leave the hive in all kinds of weather, and perish. *Remedy:* Remove to a warm dark room till the weather is warm enough for them to fly. This affliction of getting too much honey, does not often occur in large apiaries.

Fast Horses at the Fairs—A Suggestion.

So much has already been said in the *Agriculturist*, both in words and in caricatures, against the introduction of running and trotting horses at agricultural exhibitions, that it seems hardly necessary to add anything more at the present time. Let those "fast" men and women who delight in seeing horses ridden or driven at break-neck speed, get up performances on their own hook; they have no right to introduce a race course into an exhibition of agricultural and horticultural products. The legitimate object of such an exhibition is to display improved farm and garden products, and labor-saving implements, which may be studied quietly and calmly by cultivators for the purpose of learning how to improve their own practice.

A correspondent, however, suggests a mode of exhibiting the speed of horses which is unobjectionable, and may be of practical utility. We have seen the same suggestion in the Niagara Falls Gazette, the Ontario Times, and two or three other exchanges. For most farm purposes it is desirable that a horse should be a *fast walker*. A horse that can trot or gallop a mile the quickest, is not the one that can plow or harrow the largest area in a day with the greatest ease, or take a heavy load to market with the least delay. The suggestion of our correspondent is, that the managers of agricultural exhibitions offer prizes for the fastest *walking horses.* He proposes that there be several prizes, say in this wise:

1st—A prize to the single horse that will walk a mile the soonest, under the saddle.

2nd—A prize to the horse that will draw a heavy load of given weight, over a mile in the quickest time with the least weariness—all competing horses to be successively attached to the same load.

3rd—A similar prize to the last named, but for a lighter load.

4th and 5th—Similar prizes to the 2nd and 3d, for *spans* of horses.

It is also proposed that similar prizes be offered for rapid walking working oxen.

These suggestions are worthy of attention. Fast walking animals are wanted by the masses, fast trotters or runners only by the few. An exhibition of the *walking* capabilities of animals may not draw so large a crowd from our cities and villages as a trotting match, but it would have quite as much interest for farmers generally, and for their benefit agricultural fairs are, or should be got up.

* * *

Agricultural Exhibitions for 1860.

STATE EXHIBITIONS.

Name.	*Where held.*	*Date.*
Lower Canada	Quebec	Aug. 15—
National Horse Show	Springfield, Mass.	Sept. 4— 7
New-Jersey	Elizabeth	·· 4— 7
Tennessee	Nashville	·· 10—15
Illinois	Jacksonville	·· 10—15
Am. Pomological Society	Philadelphia	·· 11—14
Vermont	Burlington	·· 11—14
U. S. Agricultural Society	Cincinnati	·· 12—20
N. E. Kentucky	Ashland	·· 18—20
Kentucky	Bowling Green	·· 18—22
Nebraska	Omaha	·· 19—21
Wisconsin	Madison	·· 24—27
Pennsylvania	Wyoming	·· 24—27
Missouri	St. Louis	·· 24—29
Ohio	Dayton	·· 25—28
Maine	Portland	·· 25—28
Iowa	Iowa City	Oct. 2— 5
New-Hampshire	Manchester	·· 2— 4
New-York	Elmira	·· 2— 5
Indiana	Indianapolis	·· 15—20
Mississippi	Holly Springs	·· 16—19
Virginia	Richmond	·· 22—27
Georgia	Atlanta	·· 23—26
Alabama	Montgomery	··29—Nov. 2
Maryland	Baltimore	··30 ·· 6
South Carolina	Columbia	Nov. 13—16
Lower Georgia	Savannah	·· 22—
Geo. Cotton Pl's Conv'n.	Macon	Dec. 3—29

COUNTY EXHIBITIONS.

NEW-YORK.		
Saratoga	Saratoga Springs	Sept. 4— 7
Clinton	Plattsburg	·· 10—11
Franklin	Malone	·· 11—14
Albany	Albany	·· 18—21
Queens	Jamaica	·· 19
Monroe	——	·· 19—21
Rensselaer	Lansingburgh	·· 19—28
Westchester	Mt. Kisco(New Castle)	·· 25—27
Putnam	Brewster's	·· 25—27
Delaware	Hobart	·· 26—27
Oneida	Utica	·· 26—28
Ontario	Canandaigua	·· 26—28
St. Lawrence	Canton	·· 26—28
CONNECTICUT.		
Windham	Brooklyn	Sept. 12—14
GEORGIA.		
Hancock	Sparta	Oct. 16—20
ILLINOIS.		
Hancock	Carthage	Sept. 19—21
Knox	Knoxville	·· 25—28
Lake	Libertyville	Oct. 2— 3
Macoupin	Carlinville	·· 2— 5
Henry	Cambridge	·· 3— 5
INDIANA.		
Lawrence	Bedford	Sept. 4—
IOWA.		
Delaware	Delhi	Sept. 25—27
MAINE.		
Hancock	Ellsworth	Sept. 26—27
Franklin	Farmington	Oct. 3— 5
Waldo	Belfast	·· 10—12
MICHIGAN.		
Sanilac	Lexington	Sept. 27—28
MISSOURI.		
Jackson	Independence City	Sept. 4— 9
Gasconade	Hermann	·· 5— 6
NEW-HAMPSHIRE.		
Hillsboro	Weare	Sept. 20—21
NEW-JERSEY.		
Somerset	Somerville	Sept. 11—13
OHIO.		
Fayette	Washington	Sept. 5— 7
Portage	Ravenna	·· 5— 7
Gallia	Gallipolis	·· 11—12
Clermont	Bantam	·· 11—14
Trumbull	Warren	·· 11—14
Pickaway	Circleville	·· 12—14
Warren	Lebanon	·· 12—14
Medina	Medina	·· 17—19
Union	Marysville	·· 17—19
Clermont	Olive Branch	·· 18—20
Clinton	Wilmington	·· 18—20
Greene	Xenia	·· 18—21
Muskingum	Zanesville	·· 18—21
Preble	Eaton	·· 18—21
Defiance	Defiance	·· 19—21
Delaware	Delaware	·· 19—21
Knox	Mount Vernon	·· 19—21
Madison	London	·· 19—21
Adams	West Union	·· 25—28
Belmont	St. Clairsville	·· 25—28
Brown (Independent)	Ripley	·· 25—28
Geauga	Burton	·· 25—28
Columbiana	New Lisbon	·· 26—28
Jackson	Jackson	·· 26—28
Tuscarawas	New Philadelphia	·· 26—28
Union	Marysville	·· 26—28
Guernsey	Cambridge	·· 27—28
Clark	Springfield	Oct. 1— 5
Mahoning	Canfield	·· 2— 4
Sandusky	Fremont	·· 2— 4
Summit	Akron	·· 2— 4
Cuyahoga	Cleveland	·· 2— 5
Highland	Hillsboro	·· 2— 5
Richland	Mansfield	·· 2— 5
Crawford	Bucyrus	·· 3— 5
Harrison	Cadiz	·· 3— 5
Hocking	Logan	·· 3— 5
Lake	Painesville	·· 3— 5
Lawrence	Ironton	·· 3— 5
Licking	Newark	·· 3— 5
Lorain	Elyria	·· 3— 5
Marion	Marion	·· 3— 5
Morgan	McConnellsville	·· 3— 5
Putnam	Ottawa	·· 3— 5
Seneca	Tiffin	·· 3— 5
Washington	Marietta	·· 3— 5
Wayne	Wooster	·· 3— 5
Williams	Bryan	·· 3— 5
Butler	Hamilton	·· 3— 6
Hancock	Findlay	·· 4— 6
Champaign	Urbana	·· 9—12
Coshocton	Coshocton	·· 10—11
Ashland	Ashland	·· 11—12
Morrow	Mount Gilead	·· 10—12
Wyandot	Upper Sandusky	·· 10—12
PENNSYLVANIA.		
Allegheny	Pittsburg	Sept. 4— 7
Crawford	Meadville	·· 18—20
WISCONSIN.		
Racine	Union Grove	Sept. 11—13

* * *

A Summer Jaunt to the Northern or Polar Regions—Arctic Vegetation.

During the late Summer heats, we have been cooling ourselves by reading books of travel in polar regions. Each page has been as refreshing as an iced lemonade. And the contrast has appeared as great between the vegetation of those regions and our own, as between the two climates. "Vegetation," did you say, at the poles? Yes, in that neighborhood, though it is not very abundant, we confess. Complaining, as we often are, of our fickle, dreary climate and our uncertain and scanty crops, it will do us no harm, occasionally, to compare our lot with that of more northern regions.

Our winters are seldom so severe, or the snow so deep for a length of time, that we can not find around us some token of vegetable life. Go into the sheltered woods, or rake off the snow in our gardens, and we soon find some traces of plant life. Where is the naturalist whose heart has not gladdened in winter over the pale rose streaks on the closed petals of the Epigæa, or the faint blue of the daring little Hepatica, or the wooly-headed Mouse-ear, or the Saxifrage, and many other plants whose names we need not mention? And this in mid-winter! Spring brings a multitude more of beautiful sights, and ushers in the Summer whose luxuriant and gorgeous vegetation no pen can adequately describe.

All the Arctic books which have fallen under our notice, speak with great enthusiasm about the *Red Snow* of those regions. The scientific ones tell us that it is not snow, but "the lowes form of plant-life, the first and primitive vegetation of the most northern regions, and perchance the most primitive form of vegetable life on our planet." In learned language, it is the *Protococcus nivalis.* It looks in some places like brick dust, of a dingy red, and in others, it has a tinge of clear carmine. Strange as it may seem, these myriad particles of red dust are separate plants, each having an organization and life of its own. Let them vegetate and grow away on yonder glacier, and in this valley sheltered from the blast: they are the violets and daisies of our Arctic garden.

Dr. Kane was greatly enamored of them, and so was Sir John Ross. Both mention one noticeable thing, viz.: that the red snow was found growing most luxuriantly in the neighborhood of scarlet lichens and certain bright colored mosses. Dr. Kane gathered it at Barrow's Inlet, on both sides of Wellington Sound, and in Baffin's Bay, and at other points as high as latitude 76° 15′. Capt. Parry found it upon the ice-fields of Spitzhergen, far from land, and so did Dr. Kane on floe-ice fifty miles from the shore. This shows that it can grow where no other vegetable production exists, and is not dependent on any other. It contains coloring matter which is soluble, for on scraping away the snow on the surface, the layer beneath is found dyed a pure rose color, but less and less deeply tinged for seven or eight inches below. How intense the thrill of delight which Dr. Kane must have felt on first beholding this northern plant! It allied him at once with the grand fraternity of intrepid explorers in such cheerless and hostile regions. Ah! tell us, too, if it did not remind him of the flowers springing in his father's garden in a distant and sunnier clime.

Stopping somewhat short of lat. 76°, we find quite a respectable show of leaves and blossoms. On Disco island, lat. 70°, is a settlement, on the outskirts of which is a ravine whose flora is worth stopping to see. The mosses and lichens! who ever saw the like! Dr. Kane describes this garden very well: "Nestling curiously under the protecting tufts of mosses and lichens, was a complete parterre of tinted flowers, consisting of Gentians, Ranunculus, Ledum, Draba, Potentilla, Saxifrages, Poppy, and Sedum. The Arctic turf is unequalled: nothing in the tropics approaches it for specific variety; and in density it far exceeds its alpine congener. Two birches, three willows, that noble heath the Andromeda *tetragona,* the whortleberry, the crowberry, and a potentilla, were, in one instance, all wreathed together in a matted sod, from whose intricate net-work, rising within an area of a single foot, I counted no less than six species of flowering plants." Well does he add, soon after, "this reminded me of Humboldt's covering with his cloak the vegetation of four continents!"

Further on, he speaks of trees and shrubs reduced to mere pigmies. "Shrubs and trees!—Few of them rose above my shoes, and none above my ankles.......Here I saw the Cleaberry in flower and fruit—I could cover it with a wine-glass; the wild honeysuckle of our Pennsylvania woods—I could stick the entire plant in my button-hole."

Spring dawns upon Arctic gardens, as well as on those of temperate climates. And the lassitude we feel at that season, when the mercury rises to 60°, creeps over the traveler there, when the temperature approaches to zero!

Thus far we have spoken only of natural gardens; but there are also artificial gardens quite far to the north. At the Uppernavick, the highest Danish settlement, lat. 72° 47′, three hundred and seventy miles within the Arctic circle, Dr. Kane found at the Governor's house, "a little paling, white and garden-like, inclosing about ten feet of prepared soil covered with heavy glass frames; under which, in spite of the hoar-frost which gathered on them, we could detect a few bunches of crucifers, *green radishes, and turnip tops.* It was *the* garden, the distinctive appendage of the Governor's residence.......At last came the crowning act of hospitality, pale, yet blushing at their tips, and crowned each with its little verdant tuft, *ten radishes!* Talk of the Mango of Luxon and of other luxuries of the tropics; but the palate must cease to have memory before I yield a place to any of them alongside the ten radishes of Uppernavick."

But we can not pursue this subject. Enough has been said to remind us what a wonderful provision God has everywhere made for the welfare of his creatures; that even amid polar snows, where we should naturally look only for barrenness and death, even there can be found life, and growth, and beauty.

The Barometer—Its Usefulness to Farmers and Others.

Of the construction of the Barometer and its *uses*, very little is known by people generally. We propose here to give a few plain illustrations of the instrument which will help the unscientific reader to understand it. The word *Barometer* means weight-measurer (from *baros*, weight, and *metron*, measure.) The barometer is used to measure the weight or pressure of the air, and to indicate changes in the pressure. Storms, drouth, indeed almost all changes in weather are preceded by changes in the pressure of the air; hence the barometer is very useful to those who have crops to gather, and indeed to all classes whose business or pleasure makes it desirable to have some previous indication of the kind of weather that may be looked for.

The air which surrounds the earth extends upward (or outward) from the surface for a great distance, constantly decreasing in density and weight as we ascend from the surface of the earth. At the level of the sea, 100 inches of air weigh about 31 grains. A cubic foot of air weighs about 536 grains; and about 13 cubic feet of air weigh a pound. (A box 2⅓ feet each way contains nearly a pound of air. A common barrel contains about one-third of a pound of air.)

Though the air extends 40 to 50 miles upward, and probably much beyond this, in an extremely rarified state, yet were the whole atmosphere reduced to a uniform density similar to that at the level of the sea, it would extend upward only 26,100 feet, or about 5 miles. The entire weight of air on our globe is 11,624,914,885,408,838,323 pounds, *or more than eleven quintillion pounds!* This weight of air is equal to a layer of water over the entire surface of the earth nearly 34 feet deep, (33.92 feet.)

As the whole air is equivalent to 26,100 feet in hight of the air at the level of the sea, and as one foot of air weighs 536 grains, it follows that there is piled up upon every *foot* of the earth's surface a column of 26,100 feet of air, weighing 26,100 times 536 grains, or full 2,000 pounds. As there are 144 square inches in a foot, it follows that the weight of the air or downward pressure is nearly 15 pounds upon every square inch. *Illustration.*—Lay a board, one foot square, upon the end of a scale beam, and then withdraw the air from under it so that there shall be no upward pressure, and the air will press down the board with the force of a tun.

The reason why we do not perceive this enormous pressure of air upon our bodies, and indeed upon every thing around us, is, that the air being a fluid, presses in all directions alike, so that while the air presses down upon any spot, at the rate of 15 pounds to the inch, the air around and under presses up just as much. *Illustration.*—Place a tun of iron or lead upon a board a foot square, and then remove the air from *above* the board, and the surrounding air will press *under* the board and lift it up with the tun of metal upon it. Take a teacup, bowl, or a quart cup, and fill it even full with water; cover it with a piece of newspaper, fitting closely upon the rim; then carefully invert it, and the water will not run out. The paper furnishes a smooth surface for the air to press up against the water. The same would be the case if the cup were 30 feet high, the upward pressure of the air being greater than the downward pressure of the 30 feet column of water.

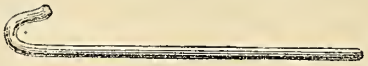


Fig. 1.

Take a tube like fig. 1, say 40 feet long, and fill it with water. Now turn it up to the position shown in fig. 2, and the water will partly run out, but the surface of the water in the long arm, at *a*, will stand nearly 34 feet (33.92) higher than in the short arm at *b*. The reason of this is, that there being no air left above *a* to press down, the column of air, 26,100 feet above *b*, will just balance or hold up the 34 feet column of water between *a* and *b*. Place one end of a pump log or pipe in water, and put into it a tight piston. Now draw up this piston so as to lift off the pressure of the air inside, and the air upon the water on the outside will press the water up into the pipe nearly 34 ft. But if the piston is drawn above 34 feet, the water will not follow it further, because the pressure of the air is only equal to a column of water 34 feet high. On this account, we provide force pumps, instead of suction (air-lifting) pumps, for wells over 30 feet.

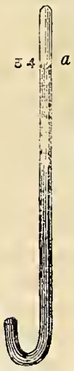


Fig. 2.

If we take a tube of two arms like fig. 3, and into one arm, *w*, pour water, and into the other, *m*, pour mercury (quicksilver), we shall find the water standing 13½ times higher than the mercury, because the latter is 13½ times heavier than water. A column of water 34 feet, will balance a column of mercury 2½ feet.

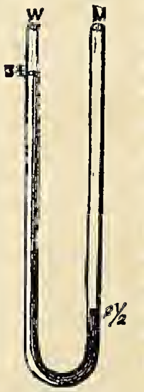


Fig. 3

The Mercurial Barometer.—If in fig. 2 we put mercury instead of water, the mercury will sink down so as to stand only about 30 inches high, because a column of air 26,100 feet high, is about as heavy as a column of mercury 30 inches high. Take a tube closed at one end, and say 33 inches long, and fill it with mercury. Then close the open end tightly with the finger, and place it in a cup of mercury, as shown in fig. 4. The mercury in the tube will ordinarily sink down to a point between 29 and 30 inches high. There is no air in the upper end of the tube to force the mercury down; and the surrounding air presses upon the mercury in the cup, and balances the column 30 inches high. It is precisely the same as if this column of 30 inches of mercury were standing upon one end of a scale beam, and a column of air of the same size, but 26,100 feet high on the other end of the beam—they balance each other. This cut (fig. 4) shows the simplest form of the *barometer.* The numerals upon the side of the tube indicate the hight of the column of mercury above the surface of the mercury in the cup, and consequently show the amount of the weight or pressure of the air which balances or supports this column of mercury. There are many forms of the mercurial barometer, but they are all made essentially on the same principle. In one kind, the tube is enclosed in a wooden frame, with a glass face. In another, the end of the tube is bent upward, as in fig. 2. In another, a leather bag holds the mercury at the bottom, instead of the cup, which makes the instrument more portable. Too much space would be required for a description of these various modifications; and our main object is only to illustrate the *principle* of the barometer, and to speak of some of its uses.

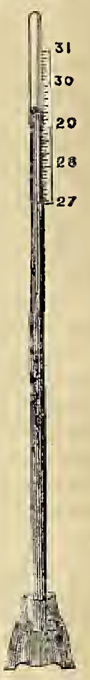


Fig. 4.

Variations of the Barometer.—As the hight of the column of mercury depends upon the column of air pressing it up, it will readily be seen, that should we carry the barometer above the level of the sea, there would be less air above to press upon the mercury, and of course it would not rise so high. Thus: if a column of air 26,100 feet high supports a column of mercury 30 inches high, it will easily be seen that if we carry the barometer up one-thirtieth of the hight of the air (or 870 feet), there would only be twenty nine-thirtieths of the air left to press up the column of mercury, and it would stand only 29 inches high. *Illustration.*—One of the early experiments in the discovery of the barometer, was that of Perrier. He filled two tubes, and found that at the foot of a mountain, the column of mercury in each tube stood 28 inches high. On taking one of the tubes to the top of the mountain, which was nearly 3,200 feet higher, he found the column of mercury only 24¾ inches high. The column *fell* as he *ascended* the mountain, and *rose* as he *descended.*

It is easy to perceive, therefore, that a barometer is a most useful instrument for determining the hight of mountains and high land. (The air is more and more rarified as we ascend, so that considerable allowance must be made for this. So also we must take into account the temperature, moisture, etc. Accurate formulas are made for all these variations, so that it is now perfectly easy to know the hight of any locality by observing the hight of the column of mercury in the barometer, and applying the corrections for temperature, etc.) With some of our readers who live nearly on the level of the sea, the mercury will range a little below 30 inches, during most of the year, while with others who live on elevated land, it will stand at 28, 27, 26, or perhaps as low as 25 or 24 inches in some cases.

The Barometer as a Weather Guide.—If the air always remained at rest, and equally dry and warm, the pressure would be uniform, and the column of mercury would remain at the same hight, in all localities at the same elevation above the sea level. The greatest cause of variation, however, is the change in pressure produced by winds. If a current of wind set towards a particular point, of course, the air will be compressed, and even heaped up at that point, and, as a consequence, it will press the column of mercury higher at that point, while the mercury would sink down at those places where the amount and pressure of the air are lessened by the amount drawn off by the wind. The reader will here see one reason why the barometer invariably falls just before a heavy wind storm—the air is drawn away from us by the storm at a little distance; the pressure is less and the barometer falls. This is an important feature of the barometer. It foretells with no little accuracy what kind of weather may be looked for.

The reasons for all the changes in the barometer are not fully understood; but long continued observations have given us several general rules for judging of the kind of weather that may be expected to follow certain indications of the barometer. Each country and district has usually some peculiar atmospherical conditions of its own, and every possessor of a barometer will soon learn to note its variations, and after a time he will come to look to the indications of his instrument with considerable confidence. We give here some

GENERAL RULES FOR OBSERVING THE BAROMETER.

1. After a continuance of dry weather, if the barometer begins to fall slowly and steadily, rain will certainly ensue; but if the fine weather has been of long duration, the mercury may fall for two or three days before any perceptible change takes place, and the longer the time that elapses before the rain comes, the longer the wet weather is likely to last.

2. Conversely, if after a great deal of wet weather, with the barometer below its mean hight, the mercury begins to rise steadily and slowly, fine weather will come, though two or three wet days may first elapse; and the fine weather will be more permanent in proportion to the length of time that passes before the perceptible change takes place.

3. On either of the two foregoing suppositions, if the change immediately ensues on the motion of the mercury, the change will not be permanent.

4. If the barometer rise slowly and steadily for two days together or more, fine weather will come, though for those two days it may rain incessantly, and the reverse; but if the barometer rise for two days or more during rain, and then on the appearance of fine weather begins to fall again, that fine weather will be very transient, and *vice versa.*

5. A sudden fall of the barometer in the Spring or Autumn indicates wind; in the Summer, during very hot weather, a thunder storm may be expected; in Winter, a sudden fall after frost of some continuance indicates a change of wind, with thaw and rain; but in a continued frost, a rise of the mercury indicates approaching snow.

6. No rapid fluctuations of the barometer are to be interpreted as indicating either dry or wet weather of any continuance; it is only the slow, steady, and continued rise or fall that is to be attended to in this respect.

7. A rise of the mercury late in the Autumn, after a long continuance of wet and windy weather, generally indicates a change of wind to the northern quarters, and the approach of frost.

Let it be noted, that the above rules do not require the barometer to stand at any particular point to indicate wind or rain; it is the *rising* or *falling* of the mercury that is to govern the predictions as to the weather. A rise or fall from 29 inches, indicates the same thing as a similar rise or fall from 30 inches. Hence the fixed marks "rain," "wind," "clear weather," etc., found upon many of the barometers hitherto made, are worse than useless—they are deceptive, and have done more than any thing else to discredit this useful instrument.

The Boiling Point Barometer.—Thus far we have only spoken of the mercurial barometer which has been longest in use. There are two other modes of determining the pressure of the atmosphere. Water usually boils at a heat of 212°, Fahrenheit's thermometer. At the level of the sea the pressure of the air upon the surface prevents its boiling or sending up bubbles of steam at a lower temperature. But on mountains, there being less air pressing down from above, water will boil at a lower temperature. On very high mountains, water boils at so low a temperature that it can not be made hot enough to cook potatoes or meats, and roasting or baking has to be resorted to. So also the *changes* in the pressure of the atmosphere are indicated by the temperature at which water boils. We have not space to describe the mode of making observations of this kind, and it is not necessary, as the method has more of scientific than practical interest. We will now describe a third method which is of great practical utility.

THE ANEROID BAROMETER.*

Take any tin box or canister and seal it up tightly, removing the air from the inside. At the ordinary pressure or weight of the air, the ends of the box will be pressed inward somewhat. Now let the pressure of the air be a little increased, and the ends will be pressed in still further, just as the mercury is forced up in the tube (fig. 4), because there is no air inside to resist the external pressure. On the contrary, let the pressure of the air be lessened, and the ends of the box will spring out. Figs. 5 and 6, we have sketched to illustrate how such barometers operate.

In fig. 5, suppose *V* to be a metallic air-tight box or case, with one end made of thin brass, and a spring inside to press it outward with a given amount of force. If the air be all exhausted from the interior of *V*, the pressure of the air on the outside would tend to press the brass end inward against the internal spring. Fastened to the brass head is a little pivot from which a thread is coiled around the shaft, on the upper end of which is an index or pointer upon the dial plate.

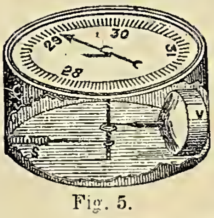


Fig. 5.

Suppose the instrument to be carried up a mountain, or from some other cause the atmospheric pressure be comparatively small; the internal spring will then throw the brass head *outward* which will loosen the string around the upright shaft. The thread from the spiral spring *S*, will then turn the index back, say to the position shown in fig. 5 above. Now suppose the instrument be carried down to the level of the sea, or that the atmospheric pressure be increased from some other cause; we shall then have the brass head pressed *inward*, and the index will then be drawn round to a higher figure, say to the position shown in fig. 6.

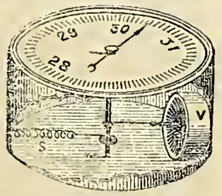


Fig. 6.

It will be seen, then, that the index will be moved forward and backward over the dial plate from 28 to 31, and thus indicate accurately the amount of atmospheric pressure upon the head of the box *V*. With proper adjustment of the box *V*, including the elasticity of the head and of the internal spring, and also right arrangement of the spiral spring *S*, the strings and shaft, and the index and dial plate—the index will show the varying pressure of the atmosphere upon *V*, just as well as does the column of mercury in the upright glass tube (fig. 4). [Our engravings, figs. 5, 6, are not accurate representations of the internal arrangement of any barometer made, but are ideal sketches to illustrate the principle of them all Several other parts are usually inserted, such as multiplying levers, etc. The vacuum box is generally thin, and made of corrugated brass, requiring no internal spring to make it elastic. In some instruments there is a series of thin boxes. Nice adjustments are required to counteract changes of temperature, etc. Our engravings are only to explain the general operation.

For very minute scientific investigations probably a costly *mercurial barometer* is best; but for ordinary use a good *aneroid* is preferable, because it is portable—can be carried from place to place without danger of derangement or spilling the mercury. It is also small and compact, and occupies but little more space than a pint cup.

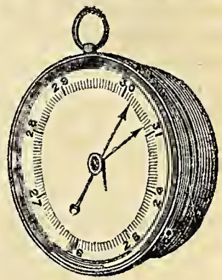


Fig. 7.

Kendall's Aneroid Barometer, (Fig. 7).—At the New-Haven Agricultural Lectures last Winter, Prof. Silliman, of Yale College, called special attention to this instrument, and placed it on a par with those of European manufacture. We sent for one of them during the Spring, and for three months past have frequently compared it with one of the best standard mercurial barometers kept by Mr. Blunt. It has proved to be accurate beyond expectation. We have recently procured several others for friends and subscribers, and they give good satisfaction. We present in fig. 7 a sketch of one hanging in our office. The outside brass case is only 4½ inches in diameter, and 1¾ inches thick. Each one is fitted in a neat leather covered box, and may be readily carried to any distance, and requires only to be hung up to be ready for use. Everything considered, these are among the best barometers for general use. When required for localities more than 4000 feet above the sea level, instruments having special adjustments should be ordered, for which a small extra charge is made upon the usual price. The ordinary price is ten dollars.

Such an instrument is desirable for every family, not only on account of its practical utility in assisting to judge of the weather, but also as a help towards developing a habit of observation on the part of the younger members of the household. We have placed them among our premiums, and until they are on sale in the country generally, we will endeavor to keep a few extra instruments on hand for those who can not get them conveniently from other sources.

* * *

Night Air.—Many people are afraid of night air. Here is what Florence Nightingale says: An extraordinary fallacy is the dread of night air. What air can we breathe at night but night air? The choice is between pure night air from without and foul night air from within. Most people prefer the latter—an unaccountable choice. What will they say if it is proved to be true that fully one-half of all the diseases we suffer from, are occasioned by people sleeping with their windows shut? An open window most nights in the year can never hurt any one. In great cities night air is often the best and purest air to be had in the twenty-four hours. I could better understand shutting the windows in towns, during the day, than during the night, for the sake of the sick. The absence of smoke, the quiet, all tend to make night the best time for airing the patient. A high medical authority has told me that the air in London is never so good as after ten o'clock at night.

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*The name is derived from three Greek words—*a*, not; *neros*, fluid; and *eidos*, a form, that is, *a-neros-eidos*, or *aneroid*, is a *form* of barometer *not* having a *fluid*.

" Stick to the Farm."

Let us sing a snatch from this good old song. Yes, stick to the farm. If half the time and energy now wasted in politics, hazardous speculations, and busy idleness, were spent in the advancement of agriculture ; if the people were as intent on preserving their farms from deterioration, as they are in " preserving the Union," and settling the manifold vexed questions of the day ; if they were half as earnest in battling with briers and weeds, and poor fences and bad soils, as with their political opponents, should we not be better off as a nation and as individuals?

Why is England to-day the garden of Europe, unless it is because every acre is so wisely cultivated ? Why is even barren New-England made so productive, unless because of the industry and intelligence of her agriculturists ? Well has one said : " The fields ought to be the morning and evening theme of all Americans who love their country. To fertilize and improve his farm, ought to be the prime temporal object of every owner of the substantial soil. All national aggrandizements, power, and wealth, may be traced to agriculture as its ultimate source. Commerce and agriculture are only subordinate results of this main-spring. We consider agriculture as every way subsidiary not only to abundance, industry, comfort, and health, but to good morals, and ultimately even to religion itself....." We shall always sing "Speed the plow!" we shall always regard the American farmer, dressed for his employment, and tilling his grounds, as belonging to the order of real noblemen. *

Lois Weedon Culture.

In England, where, owing to the high rent paid for land it is necessary to resort to every expedient for increasing its fertility, the agricultural community have lately been much exercised upon the subject of what is termed the " Lois Weedon " system of wheat growing. The name is derived from the place where it originated, the vicarage of Lois Weedon, in Northamptonshire. The Vicar, Rev. Samuel Smith, fourteen years since, conceiving that much of success in wheat raising depends upon keeping the soil in proper mechanical condition, selected a field of four acres for a trial of the following experiment. After two crops in the ordinary rotation followed there, (first oats, and then vetches) wheat was drilled in triple rows one foot apart, with intervals of three feet left vacant between each strip of wheat. These vacant spaces were dug deeply with the fork spade, bringing up about two inches of the underlying yellow subsoil. During the Spring these fallow strips were occasionally loosened to within three inches of the growing wheat, and the weeds kept down by proper hoeing, until the spreading roots occupied the ground. After the crop was harvested, wheat was sown in the fallow spaces, in triple rows as before, and the stubble left from the previous crop was turned under to remain fallow the following year. This alternate cropping and fallowing of intermediate strips has been continued in this field until thirteen successive crops of wheat have been gathered. No manure has been applied during the whole period, and although the land was previously in low condition, the yield, as stated by Mr. Smith, has continued to increase from the first, and the average yield for the whole time has been 36 bushels per acre. The soil has been deepened at each successive digging of the fallow, until instead of the five inches deep of wheat-producing land with which the experiment commenced, the ground is now from 16 to 18 inches in depth. Thus the two great requisites of successful cultivation, increased yield and increasing fertility, have been attained.

The discussion now going on about this system, is, whether it will repay the increased outlay required for the labor of spading and hand cultivation. The accounts kept by Mr. Smith of the expenses and returns seem to demonstrate that the plan is remunerative there. But with the improvements now being introduced in implements for breaking up and stirring the soil, this objection can not long be urged.

We notice this matter now more particularly to call attention to the effect of deep tillage in ameliorating the soil. The additional one or two inches of subsoil brought to the surface each year and exposed to the action of frost, sun, rain, dew, and air, in the instance just related, were equivalent to a dressing of manure sufficient for the wants of the growing crops, and added to the real fertility of the soil. The advocates of the system even maintain that by thus exposing the soil in fallow year by year, enough of the essential constituents of plants will be gathered from the air, and evolved by decomposition of the mineral deposits in the earth, to supply the wants of the wheat crop for any number of years. This extreme theory however is not needed, even if it were true. The application of manure is as easy in the Lois Weedon, as in any other system of culture, and when a sufficient depth of soil is attained, the fertility can thus be readily kept up.

To decide whether this mode of tillage shall become general, will require much more extended trial than it has yet received. Mr. Smith considers it inapplicable to other than clayey soils. The attention awakened by his experience, has induced other trials. Much prejudice exists against it, and the whole subject will be thoroughly discussed. If it should prove successful against the inevitable opposition to every novelty in cultivation, it will not require many years to reduce it to practice on this side the Atlantic. We shall note the progress of the movement, and make use of such facts presented as may seem applicable to our own wants. Several points already developed are worthy more extended notice when space permits.

The Old Story—Wheat and Chess.

ONE-HUNDRED-AND-FIFTY-FIRST ANSWER.

" Will wheat turn to chess?" is a question we are tired of seeing. Since our first agricultural reading, the error of transmutation of seeds has been shown up again and again, until it would seem that every body must know better. Yet notwithstanding the volumes of writing, the large rewards offered for a single specimen of successful chess-growing from wheat seed, and the settlement of the question by the most extended experiments, scarcely a month passes but a letter brings the same old query, "Will wheat turn to chess?" The belief in this absurdity resembles the growth of couch or quack grass—run the plow ever so deeply through a patch of it, and hoe it ever so thoroughly, and after the first fine shower, you may see the obnoxious young shoots starting from the soil, apparently as fresh as ever, and looking as innocent of harm as carefully sown timothy. There is but one way, however, to deal with weeds in the garden, or in men's beliefs, to work against them as often as they appear, so we proceed to hoe out the chess once more.

The plant is named by botanists, *Bromus secalinus*. It is a species of grass having its own peculiar characteristics as much as timothy, red-top, blue grass or any other sort. One peculiar distinction which must forever separate it from the wheat family, is the growth of the seed in panicles, forming a loose irregular collection of heads, like the growth of oats ; whereas, the wheat plant bears its seed in a spike, each grain packed close to its fellow along a common stalk—so that when you find an ox with his two well defined curved horns, degenerating into a moose with horns resembling a branch of scrub oak, or when the sheep with its upper jaw destitute of front teeth *transmutes* into a worthless cur with a formidable row of incisors above and below, then, and not until then, may you expect the spike-bearing wheat become panicle-bearing chess.

This pest of the field was undoubtedly introduced from Europe, where it has for centuries plagued the grain fields, and given rise to the same error that prevails here. There, however, belief in transmutation is much more fertile. The common people will assure you that wheat will change to rye, then to barley, then to bromus or chess, and finally to oats ! Why they should stop here, and not let it run the round of timothy, rye grass, and cat-tail, we can not understand any more than we can explain why superficial observers in this country have never detected wheat transmuting to anything but chess.

The farmers of this country a few years since had a costly proof that chess is produced from chess seed. It was introduced to public notice somewhat after the manner of the *Honey Blade* grass, under the name of Willard's Bromus. By the aid of advertisements, " certificates " and " recommendations," a large quantity of seed was sold as high as four or five dollars per bushel. It was stipulated with the purchasers that none should be allowed to go to seed! This precaution did not avail, however, and the unfortunate buyers found they had paid handsomely for a weed rightly named " cheat "—it has *cheated* many a man out of a good crop of wheat.

Fortunately it is an annual, and proper care for a few years to allow none to ripen the seed, or if any ripens to separate it from grain, will eradicate it. It will take many years perhaps to fully extirpate it, for seeds already sown may remain dormant a long time, and spring up when the season, or the cultivation favors their development. When the seeds are all destroyed, the error of their originating from wheat, will also be obliterated.

A Cheap Source of Manure—A Capital way to get rid of House Slops.

Among other improvements made on our premises this season, there is nothing that pleases us more than the plan adopted for disposing of " house slops," and we can recommend the arrangement in the strongest terms. As will be seen by the plan of our barn, on page 236, the manure cellar is partly under the barn, and partly on the outside. From the outside division, at 2 feet from the bottom, a glazed earthen-ware pipe extends 213 feet to the house. The pipe is 5 inches inside diameter, in 2-feet joints or pieces fitting into each other, the joinings being closed with hydraulic cement. A curve, not quite a right angle, was required at a distance of 40 feet from the barn, to turn the pipe in the direction of the house at a point where it could pass between trees already planted. At the house the pipe is 2 feet below the surface, and at the barn 4½ feet below, which, with a fall in the ground of nearly 3 feet, gives a total fall of about 70 inches, or 1 inch in 3 feet. This proves to be amply sufficient, as the water runs freely. At the house end, an inverted syphon joint was added, that is a curved piece, the bow turned downward, so as to be always full of water, discharging at the lower end as fast as filled at the upper end. This keeps foul air or odors from coming back through the pipe.

The upper end of this syphon piece has 3 necks. Into one of these runs a waste pipe from the sink. Into a second runs a 4-inch lead pipe from a chamber water-closet. In the third opening stands an upright 4-inch glazed pipe, which extends above the ground, just outside the kitchen door. Over this is placed a covered box, lined with zinc, and having a strainer over a short zinc pipe which fits down into the *upright* glazed pipe. The latter is firmly kept in place by bricks laid around it in cement. The box is hollowed at one side just over the discharge pipe. It is screwed firmly upon the side of the house, and is provided with a cover hung on hinges. This box receives the washing water, on washing day, and all ordinary slops which would soil the sink. Indeed all filthy water is poured in, and vegetable waste, and anything too large to run through the strainer (16 holes to the inch) is taken out as it accumulates, and carried to the manure vault.

Here, then, we have, at comparatively small cost, an arrangement which takes all the slops of every kind clear away from the house, and what is of still more importance, all these matters are saved in the manure where they are absorbed by the bedding straw, and muck thrown in. Taking into account all the sink slops, the hundreds of pails of wash water, and the chamber liquids, we think their value can not be less than $30 to $40 a year, at the lowest estimate; and it is certainly worth $10 or $15 a year to have them thus easily and conveniently disposed of, with no labor in carrying, and no unhealthy stench about the house, or in the street gutters where such liquids are usually carried. The arrangement is a permanent one, good for a score of years. Let us look at the cost, and see if it will pay. Here are the items:

210 ft. of glazed pipe (in New York) @15c. per foot	$31.50
Freight and Cartage	1.30
3-jointed Syphon	2.00
Digging 210 feet for pipe	5.25
Hydraulic cement for joints	.62
Mason, 9 hours laying down pipes	1.75
Filling up Ditch	1.12
Cost of box, and lining with zinc	1.63
Sand used around pipe	.40
25 Bricks used around upright pipe	.15
Total cost	$45.72

We see no reason why the pipes should not last perpetually, without any outlay for repairs; but allowing 4 per cent per annum for wear or repairs, and 7 per cent interest on the cost, the expense is only $5 a year.

Queries. 1.—Is it not worth $5 a year to save carrying off wash water, chamber liquids, and such fluids as can not be poured through the usual sink, even if it have a good waste pipe?

2.—Is it not worth $5 a year to have all slops deposited at a distance from the house, and thus avoid all disagreeable and unhealthy odors, around or near the dwelling?

3.—Allowing only 20 pailfuls of water to be used on each "washing day," the amount is more than 1000 pailfuls a year. In this water there is used from 75 to 150 or more pounds of soap, and it contains a considerable amount of wool and other vegetable matter worn off from garments, besides the decayed matter from the skin collected upon the clothing. Can any one estimate the value of these matters, when mixed with the manure, at so low a figure as $5 a year?

4.—Is not the soap, grease, and vegetable matters from washing dishes one thousand and ninety five times a year, worth more than $5 in the manure heap?

5.—Are not the chamber liquids collected during 365 days worth over $5 in the manure heap?

6.—If convinced that some such an arrangement as the above will *pay*, and pay well, will the reader construct one this year, or put it off to—*some time?*

Suggestion.—The glazed pipes referred to are now quite common and readily obtained, but where they can not be, a brick drain, laid in cement, is nearly as cheap, and about as good.

There is Progress in Agriculture.

To the intelligent farmer, proud of his calling, it is pleasant to compare the husbandry of the present and the past. By the aid of monumental inscriptions, some of them recently brought to light, we can learn what implements the ancients used, and how they conducted many of their agricultural processes. For example, we find that the crooked stick now used as a plow on the plains of the Tigris, and in Egypt and Syria, is just like that used three thousand years ago on the same soil. And yet, strange to tell, Egypt had her goddess of agriculture, and her pastoral songs, and her people honored the calling of husbandry above every other. A Carthaginian general showed his devotion to farming by giving his countrymen twenty eight volumes upon agriculture. And so valuable were they, that the Roman Senate ordered them to be translated for the benefit of the Roman people. The early Greeks were famous for their love of agriculture. A thousand years before the advent of the Messiah, Hesiod wrote a poem in which he discoursed of various departments of husbandry. Nor was he a mere theoretical farmer, for he had flocks and a farm at the foot of Mt. Helicon; and his soil was not of the best, since he describes it as "bad in Winter, hard in Summer, and never good." The ancients had some knowledge of the science as well as the practice of agriculture. They could distinguish the qualities and capabilities of soils; they understood why different soils were improved by mixture, and by the application of manures; they had systems for the rotation and management of crops, for the breeding and training of animals, etc. The Greeks improved upon the Egyptian plow by fitting it with a mold-board, share and coulter. The Romans derived this plow from the Greeks.

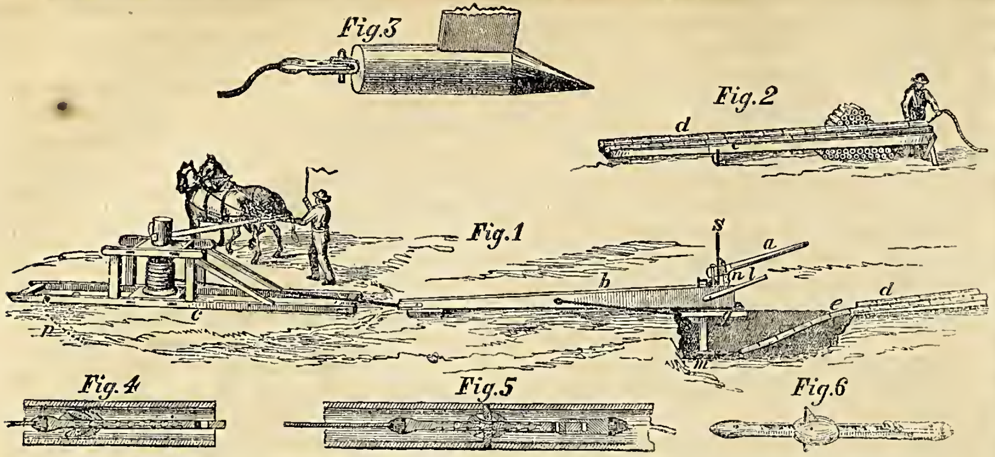
But it is not strange that after this period, agriculture made no essential progress for fourteen or fifteen centuries! What knowledge the Romans possessed was spread abroad over Europe, but little or no addition was made to it. About the middle of the seventeenth century, the minds of men seemed to be aroused. Several treatises were written upon agriculture, in France and England, new grains and grasses and fruits were introduced, and experiments were made in every department of husbandry. Among other new things, red clover was now first brought into England from Belgium. And yet, even there, in many parts of England, a first class farmer had never eaten wheat bread. Here and there, a highly favored one owned a single bushel of wheat which was made into Christmas cakes and pies; and this was all that his family tasted for a year. Tea and coffee and sugar were luxuries indulged in only upon extraordinary occasions. The farmer's wardrobe was meager and poor. It consisted chiefly of tanned or untanned skins, and his leathern doublet and hose being soon greased, and smoked, and tattered, were such as few farmers in our day would wear. In most cases, the floor of his house was either earth or stone, and his furniture of the clumsiest sort. A writer has well remarked that "if these were the days of 'good, old merrie England,' her merry men needed a good deal of mirth to compensate for the physical discomforts to which they were heirs." Indian corn, squashes, potatoes and pumpkins had not then been introduced into cultivation. At the beginning of the 17th century, potatoes were sold in England for two shillings a pound, for the Queen's table, and were used as fruit, baked into pies, seasoned with spices and wine, and sometimes sweetened with sugar.

In those days, too, botany and geology and chemistry afforded agriculture little or no aid. Mechanical inventions were in their infancy. Where, then, were steam-engines, iron plows, improved horse-powers, mowing, reaping and threshing machines, horse-rakes, straw-cutters, butter-workers, portable curd boilers and the like? Where, then, were canals, and railroads, and plankroads, and steamboats, for carrying produce quickly and safely to distant markets?

Both in England and in this country, great progress has been made in the common processes of agriculture. Draining, for example, has produced a great revolution in farming. Plowing, subsoiling, irrigation, the making, preservation, and use of manures—these and the like things are now much better understood than formerly. The economical use of labor and of machinery in farming has now been much systematized. The farmer's implements are more numerous and better. "The farmer in the north of England who, one hundred years ago, should have thought of sending his fresh butter and fatted calves and green vegetables by land to London market, would have been deemed a fit tenant for a mad-house. They are now carried there with less labor, expense, and time than it would then have required to carry them twenty miles to his market town."

Corresponding improvements have been made in our own country, and they would have been greater still if our country were older and of less extent. We have had to hew down wide-spread forests, to break up and subdue millions of acres of wild land, and to do a vast deal of other rude preparatory work. The majority of our agriculturists have been comparatively poor men. Then, too, our soil being new and fertile, we have been tempted to skin our farms, and then move further West and skin others. But lately we have been doing better. Adopting many of the improvements of the mother country, we have added to them some of our own. So that now our condition is a great advance on former times. Our implements are nearly perfect. We live in better houses, wear better clothes, and eat better food than our forefathers did. Our agricultural societies and journals are doing a great and good work. Sixty years ago, a negro slave in the valley of the Mohawk, exclaimed in despair:—"We are all ruined now, and master will have to go to jail, for he has come home from Albany with a new farming book!" But of late years, it has been discovered that it is no more dangerous to learn about farming from a fellow-man's book, than from a fellow-man's lips.

Plainly, there is great progress in the science and practice of agriculture. To no man is the future more full of promise than to the farmer. But let us see to it that with every step of our improvement in the processes of husbandry, we make progress also in the great business and aim of life. That is not merely to add field to field, to pull down barns and build greater; but it is to improve our minds, our hearts, and our lives, and to benefit the world in which we live



Apparatus for Laying Drain Tiles.

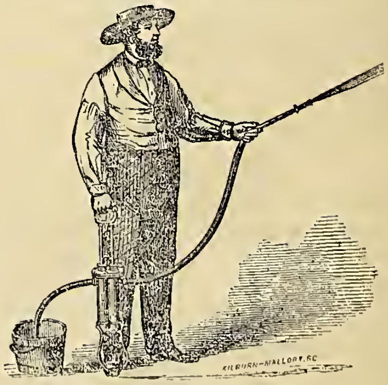
One great drawback to at least a trial of draining land, has been the supposed cost. Even though it could be plainly shown that a large outlay per acre would prove a profitable investment in the annual increase of crops, the majority of farmers could not well raise the capital thought to be necessary to make the improvement. And while there remained any doubt as to the promised benefits of the operation, the expense to be incurred, was sufficient to deter many who otherwise would have undertaken the experiment. Inventors have found here a field for their labors promising good returns, and many appliances have been brought out with a view to lessen the cost of drainage. The mole plow, constructed to open a drain in the subsoil without disturbing the surface, has become quite a favorite implement in a few localities. Its good effects have been palpable, and in a compact stratum of clay, free from stones, the drains opened in this way have been of service for years. This system, however, can only be looked upon as the pioneer to thorough drainage. It is inapplicable in any but compact clays, and even in these, the greater service of the tiles makes them the cheapest in the end. In England, where draining has reached the highest standard, mole drains are out of date. The next important step in cheapening the operation of opening drains has been the attachment to the mole plow of apparatus for forming a permanent tube within the opening made by the mole. In several inventions for this purpose, hydraulic cement is forced down into the furrow, following the mole. The use of this material for drains has not been sufficiently extended to decide fully upon its merits—the common burned clay, drain tiles have been tested and found adapted for the purpose. There were many difficulties to be overcome, in laying these by machinery, but a degree of success has been attained which promises to give new impetus to this great work, the most important now attracting the attention of agriculturists. We present herewith an original engraving showing the construction and working of an apparatus for this purpose, invented by Mr. B. B. Briggs, Medina Co, O. Fig. 1 represents the machine complete, and at work. The mole, *m*, is attached to the long beam, *b*, by an upright iron shaft, made thin and wedge shaped to cut through the soil easily. The slide, *g*, is hinged near the middle of the beam *b*, by iron rods: it bears the upright notched shaft, *n*, which is acted on by the lever, *a*. By depressing the end of this lever, the beam and mole are elevated as may be needed to conform to a required grade. The small lever, *l*, is provided with a pin for fastening the slide when arranged at a proper depth. *S*, is an upright rod over which the operator sights grade stakes set at proper distances in front of the capstan, and is thus enabled by means of the levers to give the proper inclination to the drain. Fig. 3, is a larger representation of the mole for opening the passage. A staple in the end receives a link having a proper head for attaching the rope upon which the tiles are strung. *d*, Fig. 2, shows a double wooden trough, on one side of which the tiles are strung, while those already prepared are being drawn through the other division, *c*, while the mole advances, as seen at *e*, Fig 1. The tiles are strung on sections of rope, each about twenty five feet long. These sections are connected by a link shown at Fig. 6. A movable clutch seen near the middle of this link has two projections which rest against the edge of the tile when they are drawn forward, as represented in Fig. 5, so that each section receives only the pressure necessary to force it through the open passage. If a much larger number of tiles were strung together without some such provision, there would be danger of fracturing by the force necessary to draw them along. By the use of the clutch, relieving the pressure at every twenty five feet, as much can be taken in as the strength of the rope will allow, say 300 or 400 feet, or even more.

The operation of this machine is easily understood from the engraving and the foregoing description of the parts. The frame bearing the capstan *c*, is set in the line of the required drain, and anchored by iron spuds, *p*, *p*. The beam is attached to the rope, an excavation of the proper depth, with a gentle inclination backwards, is made at the heel of the mole. The trough for delivering the rope is properly placed, the first section of rope attached to the heel of the mole, the tile strung to within about four feet of the mole, and the horses started. While this section is passing in, another section is strung, ready to be attached by the link and clutch to the former one, and so on to the length of the rope. Then a hole is dug at the heel of the mole, and the pin drawn that secures the first link to the heel of the mole. Now by pulling the rope back from the place of entrance, the arms of the clutch fall forward, and the whole sections are withdrawn. Fig. 4 shows the position of the clutch while the rope is being thus drawn backward. The small interstices left between the tiles where the clutches were used, are closed by prying the tiles from each end with an iron bar. Connections with the larger main drains are made by hand, and the necessary excavations filled in the same manner. This apparatus, it is said, can be used wherever a mole plow will operate. In very stony land, or too solid hard pan, it would be impracticable. The inventor assures us that it was thoroughly tested at the West last season, since which time several improvements have been added. We have not witnessed its operation, and can give no opinion of its merits founded on actual observation of its working capability. The model, from which our sketches were made, shows it to be a very ingenious implement; and we see no reason why it should not work well.

Hints to Inventors.

The statistics published in the last No. of the *Agriculturist*, show how large a number of inventors are engaged upon machines and implements connected with Agriculture, and there is every probability that the number will continue to increase as rapidly as it has done in previous years. Some of these will no doubt enrich themselves and benefit the country by their inventions, others will meet only with disappointment. The observance of a few plain principles would prevent much of the wasted time and money expended upon such unsuccessful enterprises. An agricultural machine, above all others, should be simple in its construction. A multiplicity of wheels, bands, springs, etc, frightens a plain man at once. Liability to derangement is also in proportion to the complication of structure. To be widely used, a machine must not be of great cost. Farmers are economical from necessity, and keep to the old way if an improvement requires much outlay.

Before undertaking an invention, one should know what has already been done by others. Thousands of models are rejected from the Patent Office yearly, for want of novelty. An invention, however good, must be "pushed," to become remunerative. The success of many of the most money-making contrivances of the day, is due more to the energy of the proprietor in bringing it before the public, and persistently keeping it there, than to their intrinsic worth; while hundreds of really valuable improvements are rusting on the manufacturer's hands, simply because people have never heard of, or have forgotton about them. Few men buy a thing at first sight, and still fewer are attracted to purchase by a single notice in a paper.



The "Hydropult."

Among the numerous implements recently sent to us for examination, is a convenient little hand force-pump, which was labeled a "Fire Annihilator," but with it came a request that a name might be given it. One of our assistants, who fortunately, or unfortunately, had dabbled in Greek in his younger days, happened to receive it first, and on trial, finding the force with which it propelled water, "pretty considerable," he overhauled his dictionary, and compounded the word "*hydropult*," which name, *he* says, signifies a water propeller. The name was at once adopted by the proprietor, and it may as well be called by that name as any other. The apparatus, which is shown in operation in fig. 1, is a simple arrangement of two valves so placed that whether you pull up or push down, they draw water from the pail or tub, and force it out of the pipe. Fig. 2 is a simplified sketch of its operation. *m*, *n*, are two brass tubes, or rather one tube, say 2 inches in diameter, bent round in the manner shown in the cut. An india-rubber pipe, of any desired length, extends from *e*, at the left, into a tub, pail, or cistern. *a*, is a piston with a sliding valve opening downward. *b*, is a similar piston, with the valve opening upward. Both pistons are attached by connecting rods to the same handle. When the handle is being raised, the valve, *b*, closes, and forces the water over it out at *o*, and leaves a vacuum under it at *n* and *m*, which is instantly filled by water rushing in through *e*, and down through the valve *a*. Now push *down* the handle, and *a* closes and draws down the water through *e*. At the same time *b* opens upward, and *a* forces the water in *m* around up through *b*, and out at *o*. Thus by either the upward or downward motion of the hand, the water is propelled through a discharge pipe attached to *o*, with a velocity proportionate to the force applied by the hand. A foot stirrup is attached below, and the apparatus is used as represented in fig. 1. The implement is convenient, as it can be carried around with a bucket of water, and be used at any point desired, for sprinkling gardens, trees, graperies, washing windows, etc., etc. It lacks the application of lever power, but this is not necessary for ordinary use. By a quick, strong motion of the hand, we have readily thrown water upon the roof of a 2½ story building, and even higher. It is well made, chiefly of brass; the packing of the valves, the packing screws around the piston rods, etc., we have omitted in the sketch, which was made in the simplest form possible to illustrate the mode of its operation. [Since making our sketch and putting the above in type, we have received an advertisement from the manufacturers, in which the apparatus is shown more in detail. Fig. 2 above, however, better illustrates the operation of the valves.]

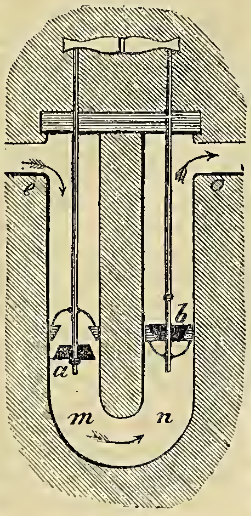


Fig. 2.

Wire Fences.

To the Editor of the American Agriculturist.

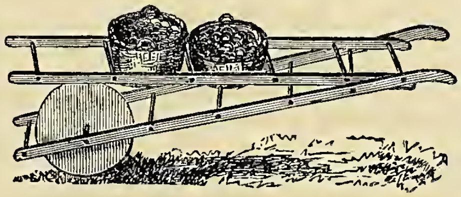
I have used the plan for wire fences described below, for five or six years, and found it to work well. For a fence of one hundred rods, first set at each end a straining post eight by ten inches, high enough for the required number of wires. Bore the holes to admit the wires near one edge, so as to leave room for a brace to be set against the post. Make the brace twelve feet long, set its lower end firmly in the ground, and resting squarely against a flat stone set perpendicularly. The intermediate posts should be four by four inches at the bottom, and four by two inches at the top, and set at intervals of twelve feet. My plan is to bore the holes before setting the posts with a ⅜ brace bit. [It is more difficult to bring the holes into exact line in this way, than by boring after the posts are set.—Ed.]

After the posts are all set, the next part of the operation is to draw in and splice the wires. To form a neat splice, let the two ends lap each other about six inches; with a narrow pair of blacksmith's tongs hold them firmly together, and with another pair of tongs turn each end around the wire until it is all coiled; a splice so made is very strong. When the wires are all drawn through and spliced, the ends are to be properly fastened. This is done by means of iron rollers, each five inches long, one inch in diameter, and pierced with three holes, one large enough to receive the wire, the others, one on each side of the first as large as the roller will allow, say, 7-16ths of an inch in diameter, and ¾ of an inch from the small hole, and at right angles with each other. Draw the wire through the small hole, pull it as tight as it can be made by hand, then with two steel levers each about 14 inches long and fitting the holes in the roller continue to turn the roller and wind the wire until it is sufficiently tight. Then place an iron pin in one of the holes, which will rest against the outside of the post and prevent unwinding, and the work is done. A fence of one hundred rods or more should have rollers for tightening at each end; for a fence of fifty rods or less, they will be needed at one end only.

I think too small wire is commonly used for fencing. I prefer the size No. 6, and would always have it annealed. This can be purchased in Philadelphia at 5¼ cents per lb. which will make a fence of six wires cost about twenty five cents for a panel of ten feet. If the fence is wanted to turn cattle only, five wires are sufficient, but for sheep and lambs, there should be seven.

I see it mentioned in the *Agriculturist* that difficulty is experienced by some, in consequence of the variations of length caused by heat and cold; but the fence that I have made on the above plan, has, as yet, given me no trouble. If it should be apprehended, that, the hard freezing of Winter would injure it, it might be easily obviated by taking out the pins. I do not think of anything else requisite to make a neat, durable, substantial, and at the same time, cheap fence. If neatness and beauty are aimed at, it would add very much to both, to give it a coat or two of white paint.

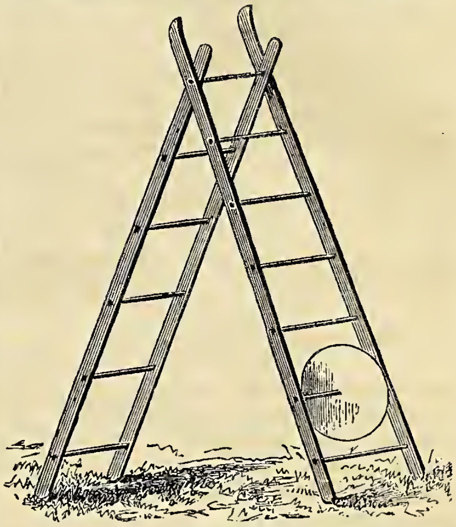
Thomas Atkinson.



A Wheel-barrow Ladder.

The above cut represents a wheel-barrow, upon which several baskets or barrels may be set and trundled to the orchard. Arrived there, it is elevated, and forms a very convenient fruit ladder, as seen at fig. 2, which may be pushed up among the branches, or stand near the outer edge of the trees as desired. It can be made of any needed length, and only differs from an ordinary double step ladder, in having a wheel near the lower end. When several baskets of fruit have been picked, they are set in the spaces between the rounds, and wheeled home. The ladder will also be found very convenient in grafting, pruning, etc., and can be run to and from the orchard, much easier than to carry an ordinary ladder. By letting the round next to the one at the top, project a little at each end, the two parts may be unfolded and set up as a single ladder, thus forming one of double the length.

We have not seen this arrangement in use in this country, but borrow the idea from a French periodical, which represents them as common in some parts of France. From the drawings, any one who can make an ordinary ladder, can construct one of this form. From six to eight feet is a convenient length for each part: this will give twice that elevation when used as a single ladder.



One Horse Humbug.

Since the successful performances of Rarey, in horse taming and training, a host of imitators have arisen, some of them men of intelligence, able to understand and apply the principles of his practice, but in very many if not most instances, mere jockeys, too lazy to work, and desirous of living by their wits, or in other words, making money out of the want of wits in other men. A correspondent sends us a handbill, copies of which, and of others similar in character, he says are posted on nearly every guide post in the Western States. They show at once the character of the enterprising individuals engaged in the business. We find here a promise to teach, for the sum of $8, "How to acquire the most perfect control over the wildest horse in one hour's time, without the use of drugs or charms." "How to break the wildest colt in half an hour's time so that a boy fourteen years old can ride or handle him with perfect safety," etc., etc.—the promises far exceeding any thing that even Rarey professes to know. But that is of small consequence with an imposter—a big lie is as easily told as a small one. Any sensible man knows there is but one way to break the wildest colt in half an hour, that is, to break his neck; then, and only then can a "boy handle him with safety." To break a colt well, is to educate him, which is a work of months or years of painstaking. The process is simple enough, but very different from what ignorant jockeys recommend. The richest part of this handbill, however, is the proposal to instruct in the arts of swindling as practiced by jockeys. The morality and the grammar of the following are about equal: we copy verbatim.

"We will teach the following jockey tricks, which we do not recommend any one to practice; but as there are men who do practice them, it is well that all should know them:

"How to make a horse appear like he was badly foundered in one night's time. How to make a horse stand by his food and starve to death, and not taste it. How to make a horse appear like he had the glanders in one night's time. How to take the truest pulling horse, and without taking him out of the stall, in one night's time, have him so that he won't pull the hat off of your head. We teach how to tell, by looking at a horse, whether there is any thing the matter with his head, neck, or lungs. How to cover up the heaves so effectually that you may work, ride or run him, and they can not be detected; this will last from 12 to 24 hours—long enough to trade him off. We teach how to put a young countenance on a horse. We teach how to break a horse from sucking wind. We teach how to nerve a horse, so that he will walk on the hardest road or pavement, and not limp, in 20 minutes' time. We also teach several other tricks, such as learning a horse how to answer questions, &c., &c."

Supposing this were not all humbug, the man who would impart such knowledge to a miscellaneous class, for money, is worthy to occupy a high position on the list of convicted felons, and is in a fair way to attain it. Give all such impostors a wide berth. Two or three dollars invested in reliable works on the horse, will be of more value than all these mountebanks can impart.

To Make a Cow give down her Milk.

A subscriber complains that he has a fine cow, which has twelve quarts of milk to spare at each milking, yet she will not let him have any until her calf has had his supply. He wants to know the reason of this. He strongly suspects there is something in his looks, his hat, dress, or moral habits, or his way of milking, which has so set his dumb beast against him. He is in great tribulation. Fie, fie, Sir! just try milking one teat at a time, as the calf does, and see if that won't make her give down. We have known this to answer the purpose, many a time. If that wont do, along with it try the practice of giving her some favorite food, just to divert her attention when you begin to milk.

Sheep Husbandry......III.

CHANGE OF PASTURE.

The old proverb that "a change of pasture makes a fat sheep," needs to be received with some qualification, perhaps, yet if the pastures are good, there can be no doubt of its advantage. Sheep are even more fond of variety of food than the horse or the cow, and unless they have a very wide range with a considerable variety of soil, they should be occasionally changed from one pasture to another. Even if the new pasture has some weeds and brush, it will not be objected to. Many plants that the cow will not touch, are greedily cropped by the sheep. The daisy and white weed which flourish upon hill pastures, are highly relished and where these weeds abound, they may be subdued by close feeding with sheep. They should be turned in early in the Spring, while the plants are tender, where you wish to eradicate them. Dock, milkweed, vervain, and many other troublesome weeds may be subdued by sheep. This incidental benefit is not to be lost sight of. The natural instincts of the sheep lead them to prefer elevated land, and by this kind of stock rocky hill pastures, remote from home, may be turned to good account.

Care, however, should be taken to eradicate laurel and other poisonous shrubs from the pastures. Both the high and the low laurel yield one of the deadliest poisons, and flocks that have access to these shrubs are often injured or killed. The wild cherry is also injurious, but is less dangerous, as its limbs are generally above their reach. In case of poisoning, a strong decoction of white ash buds or twigs, will afford relief, if seasonably administered. A teacupful of the tea may be given to each animal.

Separation of the flock.—The rams should be separated from the rest of the flock at shearing, or at least by mid-summer. It is safest to do this at the earlier period, for some sheep which have had no lambs, or lost them at yeaning time, may be in season even in June. This is particularly necessary with the fine wooled sheep. The long wools do not usually come into season until cool weather. Lambs dropped through the Winter, are a great tax upon the time and patience of the farmer. They are like winter chickens, requiring a great deal of nursing, and seldom paying for the care bestowed upon them. The better way is to regulate the yeaning of your flock by your own precaution. As a rule, the lambs should not begin to come until the Spring has fairly opened, and the whole flock should be through with yeaning in the course of a month. This will bring the proper time for coupling in this latitude as late as November. It is true that early lambs, if they do well, are more saleable, but it should be remembered that a much larger per cent of them die.

The flock needs constant observation at this time, for, ordinarily, the sheep owner has not only to guard his own rams but those of his careless neighbors. A single visit of an inferior, coarse wooled ram might damage the increase of the flock to a large amount.

The lambs also should be separated from their mothers about the first of August, to give the ewes time to recruit for Winter. If they be put in lots so far apart that they can not hear each other's bleating, they will very soon become quiet. The lambs can be put in with the yearling ewes, for, if you do not wish the yearlings to bear lambs at two years old, they also should be separated from the rest of the flock. The more common practice is to let them bear the second season, but we think the size and stamina of the sheep are depreciated by the practice. To get the best results in wool and flesh, and to keep the flock constantly improving, many think the better way is, not to let them bear lambs until their third season. Of course, if one is looking at immediate results, and makes his market for the surplus of his flock with the butcher, rather than with the breeder, this will not pay.

The ewes, when separated from their lambs, should be kept in short pasture until the milk is dried up. About a week after they are turned off, they should be examined to see that their udders are not caked. It is a good plan to strip the milk from all. This will guard against obstructions at the next lambing season. After they are dried off, they should be turned into good feed, and be allowed to restore the flesh which has been reduced in raising their lambs. The lambs also should have fresh, tender pasture, that they may not fall away after they are weaned. In Summer, as in Winter, the whole flock should have full feed, and the profits on mutton and wool will be found to hinge mainly upon this fact.

Fall Management.—It is almost the universal practice in this country to let sheep run in the pastures until they are covered with snow, and necessity compels them to the dry hay. The change from grass to hay in this sudden way is always accompanied with loss. Indeed the loss begins some time before the change, when the frosts turn the grass, and it loses its sweetness. The feed depreciates in quantity as well as in quality, and it is thought the flocks are doing well enough as long as there is a blade of grass to be seen. The wool in some measure conceals the condition of the flesh, and the loss is not detected so soon as in the horse or ox. But it very soon appears after they enter winter quarters. This neglect is very bad husbandry, for it uses up the gain which the sheep have made upon the flush feed of Summer, and brings them to the yard with decreased stamina.

As soon as the fall frosts and storms begin to come on, sheep should be provided with shelter, sheds or hovels to which they may resort at pleasure. These shelters are a good provision in a sheep pasture at all times, and should be put up as a permanent arrangement. They become indispensable in the long cold storms of Autumn, when the sheep are liable to have their fleeces saturated with rain and to contract disease. This system of shelter in stormy weather is rigidly followed in Europe, and is considered a necessity of good management. While every good shepherd is opposed to their confinement, he wishes to have shelter at hand where the sheep can reach it when their instinct prompts them to seek it. Many of the diseases of sheep—as rot, scab, dysentery, colds, etc., are mainly owing to the neglect of this precaution.

The sheds, too, render feeding much more convenient. As soon as the grass begins to fail, and they can not get a good bite, they should have a little clean, sweet hay fed to them daily, or what is better, sliced turnips in such quantity as they will eat up clean. The root crops are matters of great importance in connection with sheep husbandry. A very large part of the mutton of the British Islands is made of roots. With these the flock can be passed over from the short pasture of Autumn to the dry hay of Winter, without loss of appetite, and be kept constantly gaining. They give the farmer the means of changing food at pleasure, and furnish a full supply of succulent fodder when it is most needed. With suitable shelter and food at this period, the flocks will enter upon the Winter in thriving condition, and will show the advantage of the care bestowed upon them in heavier fleeces and carcasses, if they are fed for market, and in larger and healthier lambs, if they are kept for breeding.

Sheep—Description of Breeds.

We commend the following description of the characteristics of several leading breeds of sheep, to the attention of the general reader, and especially to those who may be called upon to act as judges at our various Agricultural Exhibitions. If some member of each Committee on Sheep will carry with him these notes, and refer to them in deciding upon the animals worthy of prizes, there will be less occasion for the usual complaint that premiums are awarded to the largest, fattest animals, without regard to good points. The descriptions we take from the Prize Report of Robert Smith upon the Live Stock exhibited at the Warwick Show of the Royal Agricultural Society of England.

LEICESTER SHEEP.

The leading qualities of the Leicesters are early maturity, lightness of offal, aptitude to fatten, and small consumption of food; producing consequently a larger amount of mutton per acre than any other breed. As improvers of other breeds they are invaluable; indeed, there are but few (if any) long-wooled sheep that do not owe something to the Leicester....The real essentials, as combined in a good Leicester, are:—Head well set on, wide across the forehead, but not too short; fine bold eye; neck very muscular and wide at the base, not too short (a very short neck being in my opinion a mistake); moderately wide between the top of the shoulders; shoulders oblique; chest wide; fore-flanks widely developed; ribs springing well from the vertebræ; loin wide and well covered; rumps wide, and a little projecting over the tail; thighs large and well let down, and with what is provincially termed a good "twist"; wool long and thickly set, with rather a curly lock; carcass' deep and round, and with an unmistakable appearance of good character.

THE SOUTHDOWN SHEEP.

This sheep is now fully recognized as a first-class animal, combining beauty of form, quality of wool and flesh, with elegance of movement. As such, they are much sought after for grazing our English parks, and adorning the seats of the aristocracy and country gentlemen. Again, for the "home farm" they are just the thing, combining, as they do, park-like beauty of appearance and delicious flesh for the squire or connoisseur. No breeders are so tenacious on points of color, bone, elegance of shape, beauty of features, and quality of wool, as the Southdown breeders. The color of his face must be a peculiar brown, neither too light nor too dark, either being objectionable; the wool must be close and fine, but in tolerable quantity, and, to use a provincial expression in the county of Sussex, it should be "as hard as a board"; the head must be well covered with wool, particularly between the ears, and carry a nice "fore-top" on the forehead. The most striking fault in many Southdown flocks is a very ill-formed shoulder, light fore-quarter, light in the brisket, and narrow between the fore-legs. No man has done so much towards remedying this defect as Mr. Jonas Webb, his flock being particularly good in this respect. The brown leg and foot is another peculiarity of the breed, as also the deeply let down "haunch of mutton," not forgetting the dark rich gravy that "cures the gout." The setting on of the neck, when nicely blended with the shoulder, gives these sheep a remarkable elegance of carriage. Thus it is that these animals are so prepossessing in appearance.

COTSWOLD SHEEP.

The general characteristics of the best Cotswolds are—their bold and commanding appearance; their finely arched neck, well run into the shoulders, giving them an ease of carriage, when walking, which is peculiarly their own. They have broad, straight backs, with arched ribs and length of quarter, carrying an enormous weight of carcass upon clean yet open legs. As a class, they possess *good legs of mutton.* Their shoulders are rather open, but in line with the back, thus giving them a good appearance in the sheep-pen; the chest is broad and deep. There is a slight difference of opinion as to the exact sort of wool they should produce. A fashion of late has sprung up in favor of the open curly coat, while the older breeders adhere to the thick-set flaky coat. The latter class of wool affords the best protection against the vicissitudes of storms upon the open hill-lands these sheep have to occupy. Be this as it may, they are fully agreed as to the animal carrying a "fore-top" on his forehead, and of no small dimensions, as witnessed at some of the Society's meetings. These sheep have become popular from the fact of their hardiness being combined with flesh and wool producing properties. They are sought after for exportation to the colonies, and for crossing the dark-faced short-wools at home. The Oxfordshire down was originated by a cross between the Cotswold ram and Hampshire down ewe.

Bark Lice killed by Sulphur.

To the Editor of the American Agriculturist:

In the June *Agriculturist* I saw a conversation between an old and young orchardist, in which it was recommended to wash the bark of trees with water in which a little soap or potash had been dissolved, to kill the "scale" or bark louse which infests apple trees. Allow me to relate an experiment which was tried on an apple tree in my father's orchard. This tree was rather small, but evidently of great age. For want of a better name, it went by that of "The old Lousy Tree"—a very appropriate name, by the way, for it was covered from the root to the end of every twig with the "animals," together with a superstructure of moss that gave the tree somewhat the appearance of an evergreen. It struggled on, however, and generally bore a few inferior apples. And now for the grand experiment. A half inch hole was bored into the body of the tree, about a tea spoonful of flower of sulphur was placed therein, and closely stopped with a plug. The result is that the lice are entirely gone, and the moss nearly so. The shoots which, before the application, averaged an inch and a half in length for a season's growth, last year made a growth of 8 or 10 inches, and, in spite of the frost, bore several bushels of as fine fruit as one could wish to see. Whether the remedy would prove as efficacious in every case, can only be determined by further experiment. E. S. GILBERT.

Allegany Co., N. Y.

REMARK.—That certainly looks like proving the sulphur remedy efficacious. We must still doubt, however—not that the facts are as represented by our correspondent—but whether the improvement in the tree was due to the application described. We have known trees take just such a start from no apparent cause, yet something unobserved must have produced the change. So many have tried the sulphur remedy, and found no benefit, that it is generally regarded, by the best authorities, as an exploded "notion." See article, "A Humbug or Two."—ED.

A Humbug or Two.

About once in four years, we meet a paragraph on its winding way through the papers, to the effect that sulphur, inserted in the body of a tree, by means of an augur-hole—said hole to be afterwards plugged up—will be absorbed by the sap and diffused through branches and leaves, so that caterpillars, borers and the whole tribe of aphides will be routed and forever repelled from the tree.

Why are we not also told that the essence of Heliotrope may be diffused through the stalk of the Dahlia, so as to make that imperial but scentless flower hereafter abound in fragrance? Or again, and better still, that ipecac and tartar-emetic may be sent flowing through vines or tempting fruit trees, for the special benefit of thieving boys? We surmise that if this were known, it would intimidate certain young gentlemen more than bull dogs, spring-guns, or man-traps. Why, then, keep it a secret?

But while protesting against gullibility, we must add a story or two to promote it. A gentleman of great integrity informs us, that he once had a peach tree in his back yard where the slops of his kitchen were often thrown. One year, at the time of the swelling of its fruit, it so happened that a half-barrel of fish-brine was emptied on the ground near the roots of the tree. When the fruit ripened, it was found so impregnated with a *fishy-salt* flavor as to be hardly eatable. In other respects, the fruit was unchanged.

Story the second:—In the travels of Anarcharsis, it is recorded,—"To obtain grapes without stones, you must take a vine shoot and cut it lightly in the part which is to be set in the ground; take out the pith from this part, unite the two sides separated by the incision, cover them with wet paper, and plant them. The experiment is most likely to succeed, if the lower part is put in a sea-onion before planting it. * * Would you wish to have on the same vine both black and white grapes, or clusters, the berries of which shall be some black and others white, take a shoot of each kind, bruise them in the upper part so that they may closely unite and incorporate their sap, tie them together, and plant them in the ground."

We hope our readers believe these things! Old humbugs are as good as new. *

Hen Manure.

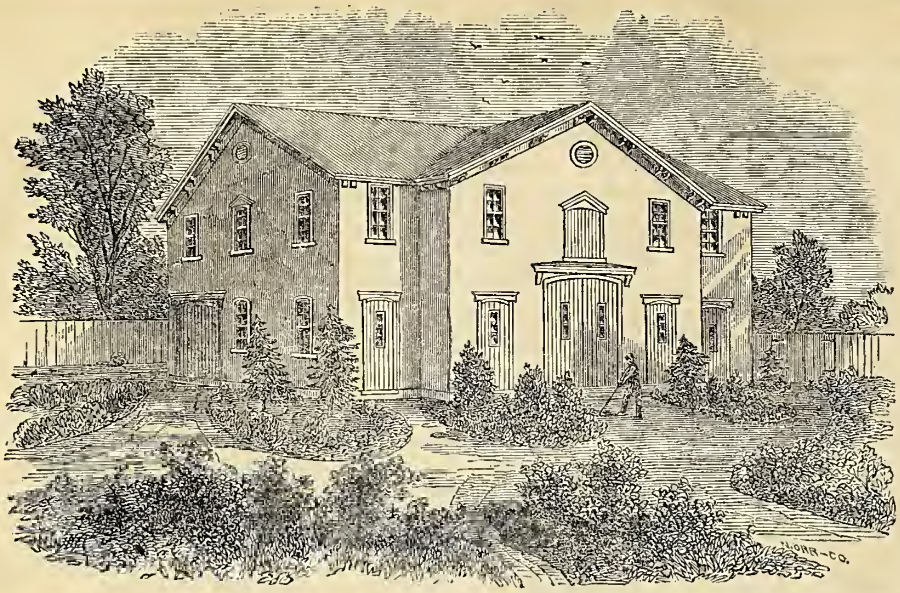
Guano, and stable manure, and ground bones, and some of the honestly-made fertilizers are valuable, and should be used whenever they can be obtained, but none of them are better than the droppings of the poultry-house. Farmers have been known to sell this article to tanners for twelve and a half cents a bushel, while it is worth nearer a dollar. It has been estimated to be worth $30 a tun, or 1½ cents per pound, which is probably not far out of the way, as compared with other standard fertilizers. As our domestic fowls are commonly fed on a large proportion of vegetable food, their manure is not as powerful as Peruvian guano. If they lived chiefly on meat or fish and similar concentrated food, their droppings would be as valuable, pound for pound, as the best guano.

To save this manure in the best way, the floor beneath the roosts should be sprinkled every few days with plaster, and then swept clean once a fortnight, gathering up the mixture in barrels, and covering it until wanted for use. Just before planting and hoeing time comes, mix this manure with an equal quantity of leached ashes, and add half as much more of plaster; then let the whole mass lie several days in a heap covered with muck or earth to ferment. When ready to plant, drop half a gill in each hill, draw on a little dirt, then plant the corn. It may also be used with potatoes, pumpkins, melons, cucumbers—in short with all crops.

And here, we are reminded of an experiment which occurred within our knowledge: A farmer, whose stock of barn-manure was not quite large enough for his wheat-field, as a last resort, went to his poultry-house, swept it clean (and it had not been cleaned for six months,) mixed the droppings with mucky soil, and sowed it broadcast over the unmanured patch. In Spring, the effect was plainly visible. As soon as mild weather set in, the patch took the lead of the field: its bright green color and vigorous growth was noticeable a mile away.

The hen-house is no hobby of ours, but we think it is generally undervalued. We see every year, in corn-fields, kitchen gardens and ornamental grounds, enough to convince us that this is one of our best fertilizers. Let us not send our money abroad for manures, until we have used all that we have at home. If any one does not wish the trouble of saving and applying this manure as we have just recommended, let him by all means gather it up at frequent intervals, and mix it with the dung heap in the barn yard This will add much to its value. *

A thorn in the bush is worth two in the hand.



Combined Barn, Carriage House, etc.

BARN, CARRIAGE-HOUSE, WORK-SHOP, TOOL-ROOM, POULTRY-HOUSE, ETC., UNDER ONE ROOF—SUNDRY LABOR-SAVING CONVENIENCES—FORM OF SPECIFICATIONS AND CONTRACT.

Last month we gave a plan of a building adapted to a particular location, accessible in both front and rear. We now present a somewhat different plan, and believing that it contains features that may be adopted in different kinds of barns, we will describe it somewhat minutely. This building has been erected on our own premises during the present Summer.

Location—Elevation Plan.—The location is near the north line fence, which prevents driving directly through the main floor. The view is taken from the south-west. A carriage road comes in from the street, directly opposite the west wing, and branching at a little distance, one wagon path leads to the main entrance, with a side road leading round to the yard on east side. Another branch turns to the west and passes in a curve through the lawn to the dwelling, and thence to the street. From this branch there is another carriage path to a wide door in the north-west corner of the barn; also a foot path to the smaller door at the south-west corner, leading into the work-shop. From the road extending into the rear yard, a horse-path runs to the door opening on the south of the east wing. (We can not properly speak of wings, as the general plan is a main building 26 by 45 feet, with a central projection on the south side, of 3 feet, and a similar one on the north side, of 1 foot. These projections are added to give variety of architecture, and break up the broad look of the north and south sides. The engraving gives only the general plan of the plots around the building. Large symmetrical Norway Spruces—not the dwarf firs shown—also tree box, and other evergreen and deciduous shrubs, planted at little cost, give the whole a cheerful aspect for Winter as well as Summer.)

Fig. 2. *Basement Plan.*—In the middle is the main or vegetable cellar, V. C. By a mistake in the drawing, the wall on the north part of this is not shown projecting a foot, as it should be made. D. W. is a dwarf wall, or foundation. Inside of this is a cistern, C, which is 20 feet long, 8 feet wide, and 7 feet deep. A brick wall is laid around it, plastered on the inside, and grouted on the outside, with hydraulic cement. A plastered brick wall thrown across the middle supports the long side walls. The bottom is covered with round stones and sand well beaten down, grouted, and plastered. Some hard bricks bedded in the bottom are laid under the entrance of the gutters at each end, to prevent wearing the bottom by falling water. The cistern is covered with an extra floor nailed to the underside of the joists, to keep out frost in Winter. At the south-west corner a cemented brick pipe (not shown) 7 inches in diameter, is carried from about mid-hight up out through the south corner of the dwarf wall, D, W. This is provided for the insertion of a fire-engine hose-pipe, in case the barn should be on fire preventing access on the inside....The *Manure Cellar*, M C, is surrounded with heavy walls laid in hydraulic cement, and is covered with a double matched floor to prevent odors rising into the stables above. The wall separating it from the vegetable cellar, (V, C,) is built close up to the flooring, and sunk below the general level, so that the two cellars are wholly isolated. The manure cellar extends outside, at *A*, *W*. This external portion is of the same depth as the main cellar, and is similarly walled up. It is covered with heavy plank doors, slightly inclined from the building so as to carry off the rain, but not high enough to prevent animals walking over them. Vent holes are provided to allow the escape of odors from the manure cellar. Through these doors the manure can be thrown up into the yard or upon a cart. Into this area a pipe brings the house slops, as described on page 234.—There are serious objections to having manure cellars under barns or stables, as they are usually built; but as here arranged, all vapors are kept from the building by the solid cement walls built up to the main floor, and by the tight sub-floor over the manure vault, while the part *A. W.*, extending to the outside, allows all vapors to escape freely into the air. By keeping abundance of muck in the manure, there will be very little escaping gas.

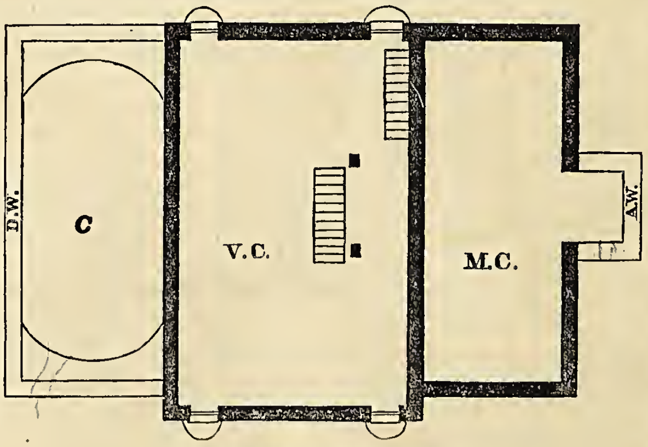


Fig. 2.—Plan of Basement.

Fig. 3. Ground Plan on First Floor.—*C*, *c*, is the main carriage floor; *C*, 30 feet long, and 16 feet wide. An implement room is taken off from one corner. The carriage floor extends round to *c*, so as to furnish a drive through from door to door, with one carriage standing in the north-east corner, and another under the stairs leading up from *I* and *W*. In case of need, the floor will hold four vehicles, and still leave room to run in and back out a fifth one at either door. The large trap-door, *T*, is convenient for unloading potatoes, turnips, carrots, etc., directly from a wagon tail into the vegetable cellar. Directly over this trap-door is another, so that pumpkins, squashes, and other articles, can be raised from a wagon to the loft above. On the approach of cold weather these articles can be lowered with basket, rope, and pulleys, from the upper loft to the cellar, through the two trap-doors. This is a convenient arrangement that might be adopted in most barns. Many articles keep much better in an airy loft than in a cellar, until severe cold weather comes on. ...... *W*, is a work shop 9x17 ft., provided with work bench, etc. This opens into the implement room, *I*, where are stored all smaller implements, earthen pots, and other apparatus pertaining to the garden. It is accessible by a door from the outside, and another at the corner leading from the carriage floor. The cutting off of the corners of *I* and *W* diminishes their space very little, while it conduces greatly to the roominess and convenience of the carriage floor....The Horse Stable 12x18, has two single stalls, s, s, 4½ ft. each, and a larger one, S, which may be used for harnessing, or for one or two horses when required. A first floor is laid of tongued and grooved 1½ inch plank, and over this, tongued and grooved 2 inch plank, inclined 1 inch to 2½ feet to carry off water. In the rear of the horses a plank, *g*, 4 inches wide is laid in on a level with the floor, and a groove is cut in this slanting towards a hole in the middle which conveys the urine down to the manure cellar. A double plank trap-door, is provided for dropping manure through...*H*, is a close room for keeping nice harness, blankets, buffalo robes, bells, whips, etc. This has an outside window in a mock door. The common harness is hung under the stairs and around the stable. The studs around the stable are lined with matched planed boards. All the wood work around the stalls is painted in wood color (yellow,) which keeps it in a sweeter condition. The feed boxes or mangers are boarded down to the floor, with slats at the bottom to let weed and other seeds down; these are removed through small doors in front to keep them out of the manure. The mangers are provided with cast iron quarter-circle feeding troughs, manufactured by Mr. Mott of this city. They are provided with a rim at the top to prevent cut feed from being thrown out. A narrow plank ladder, *h*, enclosed in slat work, passes from a platform on the outside of the building, up through the corner of the stable, to the poultry

room above. There is a trap-door above, outside the poultry room, to let down straw for bedding.

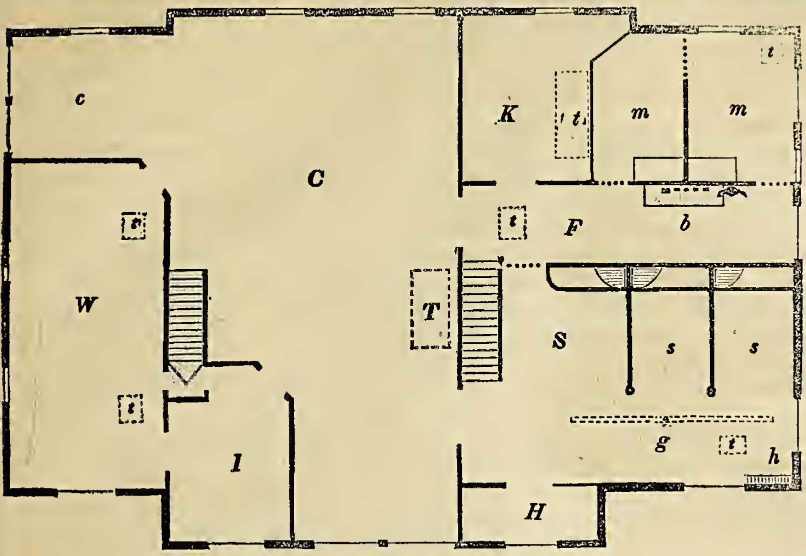


Fig. 3.—Plan of Main or Ground Floor.

The Cow Stalls, *m, m*, in the north-east corner, are 8 by 6½, and 8 by 5, the larger one for milking in. They are separated by a gate. These are also provided with a trap-door, *t*, for manure, and another above to let down straw. The Feed Room, *F*, 5x18½ is arranged between the heads of the stalls, with a door at either end, and gates to shut it off from the horse and cow stalls. The feed box, *b*, is lined with galvanized iron, and has a pump from the cistern, the spout standing over the right end. Over the center of the feed box are five spouts coming down from above with slide bottoms—the four smaller ones from four feed and grain bins in the loft, and the larger one to let down cut hay or straw. Another larger slide, the lower end above the head, and the upper end covered with a trap-door, lets long hay down at the left end of the feed room. A trap-door to the cellar, *t*, is for taking up roots for the animals. These feed, grain, and hay slides, are a decided convenience....*K*, is a cool room, thoroughly separated from the stables, and ventilated from the outside. Shelves are to be arranged in this for Autumn storage of fruits, and certain kinds of vegetables. A large trap-door, *t*, and stairs, are provided for direct communication with the cellar.

Fig. 4. Second Story.—*L*, is the general hay and straw loft, which gives ample storage, as it is 6½ feet high at the plates, and can be filled up to the ridge-pole. *O, O*, are rooms for general storage, especially for drying garden seeds. *D*, is a sleeping room for a man, accessible by the narrow stairs leading up from the work-shop and implement room. These stairs are closely boarded over, which allows hay to be piled on them without being exposed to taking fire from any light carried up to the sleeping room. The main stairway is also boarded over to allow hay to be piled over it. The Poultry Room, *P*, is boarded up on the outside, and thoroughly plastered on the inside to guard against insects. The laying boxes *e*, are provided with stepping boards in front, and they are placed far enough from the wall to admit going behind them for taking out eggs, and for cleaning them. The front of each box is closed except an entrance in one corner large enough for a fowl, so that the laying or setting hens are screened from sight. A board hung on hinges is placed behind each horizontal tier of laying boxes, which can be partly open for ventilation, or be turned up for ready access to the nests. The roosting poles are laid upon three strips inclined against the wall. These poles and the boxes are movable, so that every part can be taken out and thoroughly cleansed and white-washed as often as may be needed. The room can be purified with fumes of burning surphur, or with chloride of lime. The fowls are readily taught to go up and down their enclosed passage way by dropping a little corn upon the ladder, made of narrow strips nailed on a board. An open pipe extends from the poultry room to the gable ventilator. The lower sashes of the outside windows are shielded with woven wire so that these sashes can be left up for free admission of air except in very cold weather. The location of this room on the south side makes it warmer in Winter. The fowls have free range of the yard which is surrounded by pickets above the fence. They have also admission to the manure cellar by a fowl ladder in the outside area (*A, W*, fig. 3).

The various bins, *z, z, z, z*, trap-doors, slides for hay, *x, i*, straw, *t, t*, and grain, etc., referred to in the description of the main or ground floor, are indicated in fig. 4. Two pipes, *v, v*, from the horse and cow stalls are seen coming up through the floor; they extend to the ventilators in the sub-pediment or gable, and convey off all foul air.

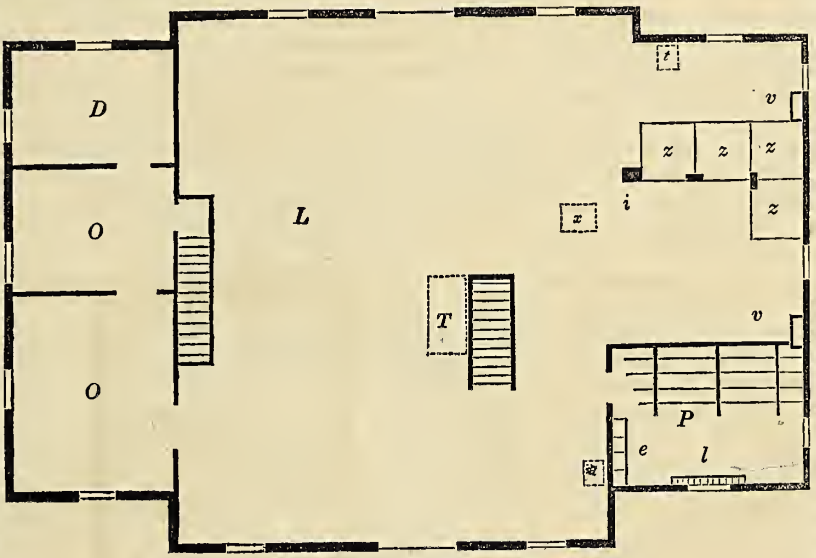


Fig. 4—Plan of Second Floor.

SPECIFICATIONS AND CONTRACT.

As a guide to others who have occasion to build, we present below an exact copy of the specifications and contract made for erecting the above buildings; and we here remark, that it is always desirable to have such specifications, naming every item possible. This enables one to know what his structure is to cost, and prevents after disagreements. In the present instance the specifications were so definite that on the completion of the structure the total sum of extra charges amounted to barely $2½—for some few items not thought of at first. (It is due to the builders, Wm. Post, and Wm. Post, Jr., to say, that everything was done in the best manner, and neither the proprietor nor the superintendent found a single cause of complaint with respect to materials or workmanship.) As a general rule, we prefer the employment of a professional architect, when a competent and reliable one can be obtained. For a small sum, 3 to 5 per cent on the job, such a person will make all needed drawings, and watch the work from beginning to end. The proprietor thus has the assistance of one who is experienced in such matters, and is usually saved much more than the cost of such assistance, in the better work and materials secured.

Specifications of the materials and labor required in the erection of a combined barn, coach-house, stable, etc., according to the plans and elevations of the same, as represented in figs. 1, 2, 3, *and* 4. *Prepared by* W. H. Ranlett, *Architect, N. Y. city.*

The Mason to make all the necessary excavations for the cellars, foundation walls, cistern and areas; grade the surplus earth properly around the building on a slope of 1½ in. to the foot, and remove all rubbish when the building is complete. The manure and vegetable cellars to extend under all the stalls and the large coach room, with proper divisions, areas, and outlets. The walls of the manure cellar laid up 18 inches thick with hydraulic cement mortar, 3 parts sharp sand and 1 part cement; the division wall to be bedded 6 in. deeper than the outside walls and built up to the floor; vegetable cellar and foundation walls, 18 in. thick, laid up with best lime mortar; cellar 6¼ feet deep; dwarf walls 3 feet high; all the walls laid up with good building stone. Cistern made oval, 20 feet by 8 feet, in the clear, and 7 feet deep, with a partition across the center; the walls laid up with bricks in best cement mortar, 2 parts sand and 1 of cement—4 inches thick and grouted behind—the bottom laid with brick upon the edge and grouted with cement, and the whole interior to be well plastered with cement mortar and washed; to be 8 by 16 inch brick piers where required in the cellars; also circular area walls of brick around the cellar windows. The fowl room to be lathed and plastered, one heavy coat of lime, sand, and hair mortar, whitewashed.

The Carpenter to furnish and put up a good frame of sound spruce or pine sawed timber, well framed and braced in every part; the sills, posts, and plates, 4x8 and 4x9; girts and inter-ties 4x6; first tier of beams 3x9, set 24 inches apart; second tier 3x9, 16 inches between centers, with one tier of cross bridging over the coach room; chestnut girders 6x6; valley rafters 2x10; main rafters 2x9, and jack rafters 1¼ by 8, set 20 inches apart, bevel joints cut true and strongly nailed up; the roof strongly supported on the cross girts; door studs 4x6, all other studding 3x4 set 24 inches apart. The *sides* covered with best sound ¾ pine boards, planed, rebated, and strongly nailed on with 8d nails in every stud, post and brace, and not over 5½ inches to the weather, and lap not less than one inch; water table project 4 inches and beveled, corner boards 1¼ inch thick properly made.

Cornices on all the sides to be made as represented on the elevation. and put up with moldings and brackets complete—the brackets 14 in. long, 10 in. high, 4 in. thick, and put up in couples on each side. For the *Roof: rafters* covered with good sound hemlock boards, with close joints, and overlaid with best single cross charcoal tin, put on in the most approved manner, and all the rosin removed from the tin before painting; 4 in. tin leaders to convey all the water from the roof to the cistern. *Windowframes* made and the sashes fitted, the lower sash to slide up; glass 10x14, with 8 panes to each window.

good strong batten shutters made and hung to all the windows on the inside of first story with proper fastenings and back catches; the windows on the east side, 12 lights, each 9x13; 3 windows in cellar, 6 lights, 10x12, with shutters hung at the top on the inside.

Doors outside, made of narrow clear tongued and grooved 1½ white pine plank, planed both sides, and strongly nailed to 3 battens each; four of the single doors and one pair of the double doors, each to have a sash of 3 lights 8 by 14 in. glass, set in, and molded on the outside; front door 8 feet by 9 feet high; end door 7 feet by 8 feet high; all other outside doors 3 feet by 7 feet high; inside doors, such size as may be required by proprieter, of 1 inch boards planed both sides, tongued and grooved, and strongly battened. Four octagon and circular *blind ventilators* in the sub-pediments, each 2 feet diameter; the blind slats to be put in to prevent water and snow from driving in. *Floors* to be laid with 1¼ in. milled spruce plank strongly nailed to the beams; carriage floors laid with 2 inch spruce plank worked; floors in cow and horse stalls to be *overlaid* with spruce plank 2 inches thick, tongued and grooved and to incline 3 or 4 inches; a suitable plank *gutter* to convey the urine to the manure cellar; two *trap doors* from the horse and cow stalls to manure cellar, made double and strongly secured; trap door in the carriage room to vegetable cellar, 3 by 5 feet, and one directly over it of same size; one in the vegetable room 2½ ft. by 6 ft.; and one 2 by 2½ feet from feed room to vegetable cellar, all to be battened and strongly made; also trap doors to let hay from second story to feed room, and straw down behind horses and cows. All *partitions* between rooms on first floor set with milled spruce plank planed both sides and strongly nailed top and bottom and in the middle to a 2x4 planed strip; partitions up stairs of boards ⅞ thick, milled and planed one side; partitions to fowl room set with 2x4 strips, 16 inches between centers, for plastering; division between horse stalls of 2 inch plank, 6 feet high, hip posts to be 6 in. round, and secured to the floor and ceiling; division in the cow stalls, 4½ feet high; fronts of all the stalls 4 ft. high; the outside of horse and cow stalls lined up with milled spruce plank. Four *gates*, 4½ feet high, in the several stalls. All the *bins* and cribs made of 1¼ milled plank planed both sides and strongly put up; the *slides* and two *ventilators* made of ⅞ milled boards planed on both sides with 1¼ by 4 in. bands on the outside. The stall ventilators to connect with one of the semi-pediment blinds for an outlet. *Stairs* made strong with 2 in. strings, 1¼ in. steps, lined with milled boards on the under side, the sides and top enclosed; a strong step ladder from vegetable room to cellar; and a movable step ladder from carriage floor to vegetable cellar under trap door. The *manure cellar* to be covered with common white pine plank, the joints battened; the outside area to incline; and to have a trap door of sufficient size strongly hung—suitable plank bridges to the carriage doors; to be a ledge ladder 10 inches wide from the outside, through the horse stall, to the fowl room above, enclosed with slats, for the fowl entrance to their room, which is to be fitted up with roosts made of 2 in. round sassafras poles, and laying boxes 4 tiers high and 5 long, open in front, the holes 7 in. by 8 in., lids on the back, hung by butts and secured with buttons; boxes 14 inch cube inside.

Large doors hung by 30 inch straps and hooks, second size doors by 20 inch straps and hooks, both pairs secured by swivel bars fitted to work with ease; all other outside doors and two pairs shutters in hay loft hung by 16 inch straps and hooks, and to have good strong thumb latches to the doors and iron hooks to the shutters; three of the outside doors to have good 6 inch dead locks with brass keys, the other outside doors to have strong bolts; interior doors hung by H L hinges, large size, and secured by wrought thumb latches; gates hung by 4 in. butts, and secured by 6 inch round bolts; trap doors to cellar and loft hung by straps and plates, and all the trap doors to have good strong flush lifting rings; manure cellar trap door hung by strap hinges, cellar sashes to hang by butts and be secured by bolts.

Painting.—All the outside of the building and the insides of all the outside doors, window shutters both sides, all the partitions and divisions in first story, to have one good coat of white lead and linseed oil, and one coat of best zinc paint and linseed oil put on at proper times; the tin roof and leaders to havo two coats of Ellery's India Rubber paint.

The building is to be complete in every part; and if any thing is omitted, necessary to complete it according to the drawings, it is to be done by the contractor without extra charge.

Contract with Builder.

Memorandum of an agreement made this first day of ——, 1860, by and between ————, of the first part, and ———— Builder, of the second part, in the words to wit:

The party of the second part, for a consideration herein-after-named, doth agree for himself, his heirs and assigns, to furnish all the materials and labor required, and erect and build up for the party of the first part, a Barn and Stable combined, according to the specifications hereto annexed, with plans and elevations accompanying the same, in every part, on or before the —th day of —— next, accidents by fire excepted. And for the true and faithful performance of all the above and singular, on the part of the party of the second part, the party of the first part, doth agree for himself, his heirs and assigns, to pay or cause to be paid to the party of the second part, the sum of —— hundred and —— dollars,* lawful money, in several payments as follows: when the building is enclosed one third of the full amount; when floors are laid and one coat of paint on tho outside, one third of the full amount, and the remaining one third of the whole amount when the building is completed and approved by the superintendent.

Any alterations that may be required by the party of the first part, shall be made by the party of the second part, and the price agreed upon by both parties before doing the work, otherwise such alteration will be considered a part of the contract.

And it is hereby agreed by both of the contracting parties, that any difference of opinion as to quality of materials, the charge for any extra materials or labor, the damage to the proprietor by any failure on the part of the builder to complete the structure in the manner, and at the time specified, etc., etc., shall be referred to the superintending architect, whose decision shall be accepted as final.

Signed ————, L. S. Party of the First Part.
————, L. S. Party of the Second Part.
Flushing, N. Y., ————, 1860.

* The contract was first drawn in this form, but subsequently the painting and some other items were assumed by the proprietor, for the purpose of experimenting with paint, etc. The whole cost of the structure complete, including alterations, architect's fees, etc., was fourteen hundred and eighty four dollars and sixty cents.

Chickens Versus Insects.

The birds will capture many of these pests of the garden, and so will toads. Bottles of sweetened water hung around on trees and bushes and vines, will entrap multitudes. Boxes covered with glass, or millinet, or oiled cloth, will protect melons and squashes from the striped bug and his cousins. But the old fashioned method of using chickens is one of the best. Bring the coops into the garden, and keep them there until the chickens are as large as quails: after that they will begin to scratch and do other injury, and should be put out. Bring in new broods as fast as the others are removed. If grasshoppers invade the garden, large chickens should be kept to fight them; and they will do it effectually.

Training the Peach Tree.

The following, translated from the Revue Horticole, contains principles applicable to the care of Peach trees in any climate. The great extremes of temperature in this country render proper pruning even more necessary than in France. Our fervid Summers often induce a growth of wood which must suffer severely during the inclement months, unless checked and hardened by cutting back.—Ed.

Left to itself, the Peach tree, whether budded or not, pushes vigorously for the first two years. In the third, its lower branches near the fork become weak, and decay, and vigor is only maintained in the extremities of the main branches. The evil is not great at first, but it increases every year; the upper shoots make less growth, and by the Spring of the third year, one-third at least of the shoots perish. At the age of eight or ten years, a Peach tree that has never been pruned, exhibits only a few weak twigs situated at the extremities of the strongest branches. In violent gales, such as we experience in the south of France, the branches, bending under a load of fruit, are split from the stem; the fruit is lost, and one may consider himself fortunate if the tree survive the mutilation. If the splitting of the tree does not cause its death, yet it leaves it one-sided, and the portion left is so much more exposed to the action of the wind, that, by its swinging, the fruit is tossed to a considerable distance, and is destroyed.

When the Peach tree is not pruned, its branches droop owing to the weight of the fruit, and the cultivation of the ground is consequently much more expensive because draft animals can not pass under the trees, and the soil has to be worked by the spade. Now ten good workmen would scarcely do so much in a day as one would in the same time with a plow drawn by good cattle; and I hold that the great secret of successful cultivation consists in obtaining the greatest and best amount of produce with the least expenditure of time and money.

Having pointed out the evil, I now proceed to the remedy which with me has proved successful. The art of pruning consists in aiding Nature. Remove from the tree that which only weakens it; induce a flow of sap towards the weak parts; or maintain, in short, a proper equilibrium between the production of fruit and that of young wood for bearing in the following season, for the Peach bears on the one-year-old shoots, and never on the older wood.

My orchard is situated in a plain; the soil is a light, very deep, sandy clay; the trees are planted in rows 13 feet apart each way; the intervals are sown with Lucern, but not within 2½ feet of the trees; the ground is plowed in Spring. Every third year when the roots of the trees are uncovered, I put to the foot of each tree some half-rotten dung, and over this two good handfuls of half-slacked lime. Since I adopted this proceeding, the trees have made shoots from 30 to 40 inches long.

If we leave a Peach tree for a year without pruning it must suffer from the cutting necessary to bring it into proper form. In the second year I commence giving the branches their right direction. On account of the violent and prolonged high winds which prevail in the south of France I limit the hight of the stems to about 2½ feet, so that for several years there is no necessity for using a ladder.

When a young shoot is cut with a very sharp knife, gumming does not take place. I am no advocate for disbudding, which sooner or later induces that disease.

Supposing we have before us a Peach tree three years old, and which has been allowed full liberty of growth. Before touching the tree it is necessary to understand why such and such branches should be cut; and the form which the tree ought to take should be constantly kept in view.

1st. I commence by removing all the horizontal and drooping branches from the outside of the principal branches. I do so because these branches, being most exposed to the air, extend much, and cause the tree to lose its form by the weight of fruit which they bear. The weight being more easily borne on a perpendicular than on a horizontal support, it is well to preserve for the principal branches those that are the most upright.

I suppress all the exterior branches in order to give the tree a goblet form. On this form the wind acts generally, and consequently it offers more resistance and less elasticity than a single branch, so that the fruit is not so liable to be shaken off.

2d. The tree being formed, it is no longer necessary to encourage the vigor of the tree or the flow of sap chiefly to the extremities of the principal branches, but rather to the branches which produce succession shoots; for the more these are increased, the greater is the chance of an abundant crop, as the fruit is only borne on the one-year-old wood. I do not mean to say, however, that we ought, every month, or oftener, to shorten all the shoots which a tree may produce in the course of the year. No. This would be impossible in cultivation on a large scale; and besides it would cripple and stunt the tree; for many of the twigs or laterals so produced would perish in Spring following. This always happens where there is too much spray; and when the tree becomes like a bush, it produces only small fruit. It should be recollected that if a tree grows too much to wood, it will produce but little fruit, and *vice versa*. We should therefore endeavor to maintain, as above recommended, a proper equilibrium between these two productions.

3d. In order to attain this object I pinch all the extremities of the branches to a variable length, according to their position and the vigor of the tree, rarely however to less than 8 or 10 inches; and I always cut to a bud pointing inwards for a leader. This, with me, is an invariable rule; and I always choose the most vigorous double buds.

If a tree runs up too high and at the same time is naked at the bottom, I cut back all the new upper branches to five or six buds. This proceeding checks the flow of sap to the top, and generally induces shoots to push from the naked parts below. If the shoots so produced attain the length of one foot, I cut them back for two seasons to four or five buds. When these young branches are in a condition to take the place of the old, the latter are cut back in the course of a year, but not all at the same time: the wounds are covered with grafting wax.

To Promote Fertility in Fruit Trees.

Every orchardist must have observed that some fruit trees of superior quality and of luxuriant growth, are yet slow in coming into a bearing state, and are afterwards inconstant. This is the case especially with the pear tree. Let us note down some of the methods proposed for remedying this evil:

An abundant and rapid flow of sap tends to the growth of new wood and leaves, rather than to the formation of fruit-buds. Whatever checks this flow, will excite the production of flower-buds. For example, select a vigorous evergreen which has thus far shown no cones, and transplant it, and next year it will be covered with seed-vessels. So it is often with fruit trees. The check thereby given to the growth of roots and branches, causes the organizable sap to accumulate in the branches, and directs it to the formation of fruit. Hence it is, that formal root pruning is sometimes practiced. As this process is described in nearly all fruit manuals, we will only remind the reader that it should be practiced only in the fall or winter. Mr. Rivers of England, as nearly everybody knows, no sooner catches any of his dwarf pears napping, than he lifts them from the ground and sets them back again. Fruit bearing is quite sure to follow.

Ringing the branches is another method. This consists in taking out a circular section of bark, about an inch wide, on several branches of the tree. The effect of this is to prevent the return of elaborated sap from the tops of the branches to the limbs and roots below, and almost always produces the formation of fruit-buds. This practice is not to be generally commended: it robs the lower portions of the tree of the proper food, and renders the girdled branches useless afterwards.

Bending the branches downward, is another and better method. This impedes both the ascent and descent of sap, and causes its accumulation all along the branches in the form of fruit buds. Who has not observed that a crooked apple-tree often bears better than a perfectly straight one? And one with a flat, spreading head, better than a pyramidal one? Hence we see the wisdom of a practice common among nurserymen, of removing the central branches of young apple trees. This bending down of the branches should be done in June or July, while the shoots are most flexible.

Training the branches to a wall or trellis, is another method. The slight compression of the ligatures, and the bending of the branches, causes a check of the flow of sap, and so induces fruitfulness.

A Timely Hint for Tree Planters.

Who has not observed that many trees, such as the pear and cherry, the tulip-tree, and horse-chestnut, are often injured on the south and south-western sides? This is probably caused by the scalding heat of the sun on the bark, during mid-summer, or its rays in early Spring, thawing out the frost, only to be succeeded by hard and sudden freezing. Were trees differently trained from the beginning, perhaps this injury would seldom be suffered. If branches were allowed to grow along the entire trunk, or at least enough to shade the entire stem from the sun, probably the bark would remain perfectly sound. For trees which have been denuded of their lower boughs, we would recommend a light band of straw or hay wound loosely around the trunk from the bole up to the branches. For large trees upon a lawn, it will answer nearly as well to set up half sections of the bark of other trees on the exposed sides, tying them neatly to the trunks.

Wine from Native Grapes.

The multitude of grapes now being planted in every part of the country, must soon furnish fruit enough for the market and for wine-making. Quite large experiments have already been tried in wine-making, even in New-England and in New-York last year. One firm in Boston manufactured twenty thousand gallons of wine from grapes grown on the Charles river. A grape grower's association in Connecticut is doing much towards awakening an interest and diffusing information on the subject of grape culture and wine making.

All admit that the Catawba grape, as grown in Ohio, Kentucky and Missouri, makes an excellent wine; the question is, whether other native grapes will do the same in States further north. We might, as moralists, raise another query; whether, if they would do so, the extensive manufacture of wines for common use would be likely to promote the cause of temperance and public virtue. But we waive that point, now, much as might be said upon it.

The wine tasters tell us that thus far, the leading defect in our native wine-grapes is the lack of sugar and of tartaric acid, two main elements in good wine. To bring our northern wines up to the required standard, it has been found necessary to add from two to three pounds of sugar to one gallon of grape-juice. Some use clear honey, and think it imparts a very fine flavor. But a perfect wine grape would require no such additions.

It has been laid down as a rule by some experienced vintners, that no grape is fit to be called a wine grape which will not, in drying, become *a raisin*. Where is the American grape that meets this requirement? Even the Catawba does not, in the favorable climate of Ohio. Others again, say that wine grapes must grow on soil of volcanic origin; and in confirmation of this, they remind us that the best foreign wines grow in such regions. May we not, then, expect much from the wines of California?

So far as we yet have learned, the Clinton grape yields the best wine in the northern States. This wine possesses that rich nutty flavor which characterizes the best imported sorts. The Delaware also promises well. Fastidious wine tasters may call our native wines "mere cordials," "weak syrups," or what they please; but we firmly believe they are better for our health and our morals than the foreign wines, most of which are adulterated.

My Winter Killed Vines.

A subscriber writes us in great sorrow, complaining that his two Isabella grape vines, planted on the south side of his house in a rich border, have grown six or eight feet high for two Summers past, only to be killed to the ground every Winter. He gets a handsome growth of canes every Summer, but no fruit. What shall I do? he inquires.

Your case is a plain one, Sir. Your vines are in an excellent position, considering your cold climate, but the canes need taking down from the trellis every Autumn and covering with litter or common soil. Next Fall, we advise you to cut away full half of the mass of canes growing this Summer, and leave only the strongest and best ripened wood. Lay these on the ground, about the first week in November, fastening them down by short stakes, then throw on them just soil enough to cover them from the sun. The buds will thereby be kept dormant until Spring. Then, but not too early, uncover the canes, let them lie on the ground ten days or a fortnight, tie them up on the trellis about the tenth of May, and we will warrant you vigorous vines and abundant fruit. Try it and see.

Silver-Leaved Shepherdia.

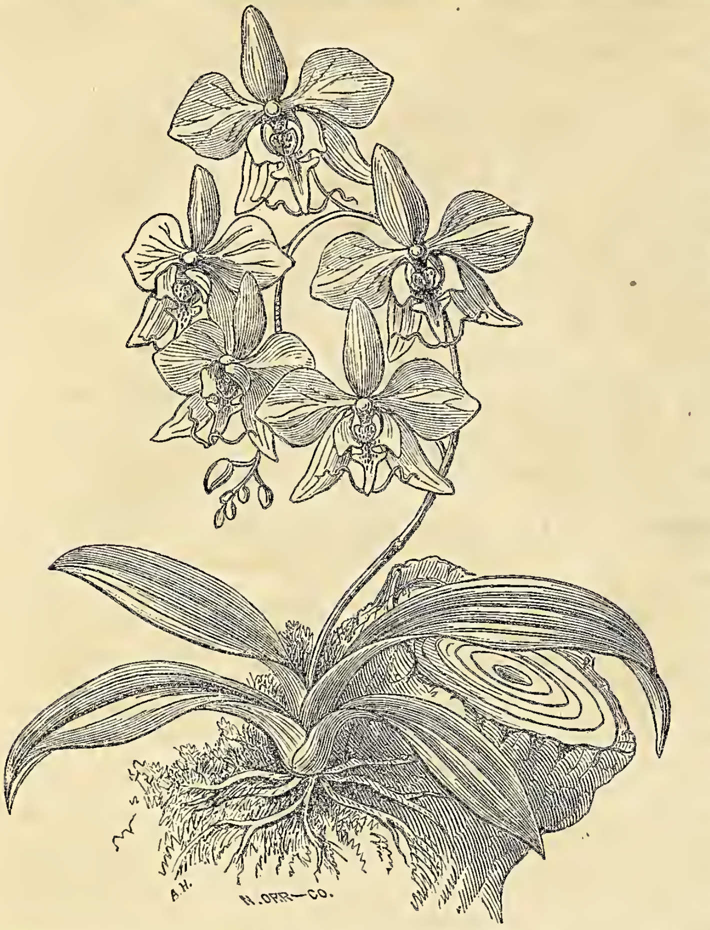
We wonder that so little attention is paid to the silver-leaved Shepherdia (*Shepherdia rhamnoides*) It has leaves shaped like the willow, with a sort of greyish or silvery tinge like the Olive. It grows from six to ten feet high, blossoms quite early, and retains its foliage late in the Autumn It has berries about the size of large black currants, which are quite pleasant to the taste. Though originating south of Albany, it is hardy north of that latitude; it also transplants as easy as a lilac Group this bush with the American and European Euonymus, and the purple leaved Berberry, and the effect will be quite striking.

It was first discovered, we believe, by Prof. Nuttall, in the forests of Missouri, in the year 1810, and named in honor of his friend Mr. Shepberd, of Liverpool, England.

* * *

"Sir," said a little blustering man to a religious opponent, "to what sect do you suppose I belong?" "Well, I don't exactly know," replied the other, "but, to judge from your appearance, and the buzz you are making, I should think you belong to the class called *in-sects*."

In these days of crinoline the world of fashion is truly "a wide, wide world."



Phalænopsis—An Orchid or Air Plant.—

(*Phalaina*, a moth, *opsis*, resemblance.)

BY DR. JAMES KNIGHT.

The above figure is intended to represent Phalænopsis grandiflora, the specimen most commonly found in collections of Orchids, and generally admitted to be nearly equal in beauty to P. Amabilis (the first introduced); and a much more free growing variety, bearing a greater number of, and larger flowers.

This most singular and very beautiful species of *air-plant*, was discovered by Dr. Blume, a noted Botanist, on the coast of Nusa Kambanga, India, where it was growing on thick low trees, covered with moss, coiling its rope-like roots round the branches, and hanging in entangled tufts, suspended in the air. Phalænopsis Amabilis being the first variety discovered, was sent to England in 1836, and first flowered in the establishment of Messrs. Rollinson, of Tooting near London, and as we have been informed, the sum of fifty pounds sterling ($250) was asked for a single plant ! and we know of one recently imported to this country, that cost eight pounds sterling ($40) at London. The price of P. grandiflora, rates at the present time, at from three to four pounds at the Messrs. H. Low & Co.'s Clapton nurseries near London, the largest importers of East India Orchids, in England.

The flowers of P. grandiflora grow upon a scape or flower stem, arising from the root of the plant to about eighteen inches in length. It bears from eight to ten flowers, each flower measuring about three inches across, resembling a most beautiful white winged butterfly ; the body or center is shaded with a brilliant luster of golden yellow. These flowers are all in perfection and expanded at one time. We had one about a year ago in bloom, that we exhibited to the Farmers' Club at the American Institute, that remained in flower five weeks, in perfect form and color. J. Paulmere, Esq , of Jersey city, had one in bloom this Spring, even a greater length of time ; having been kept under very favorable circumstances, his Orchid House being very complete in all its parts. These good qualities, with its rarity and beauty, make it a very valuable plant, but we do not entertain the opinion, with many others, that it is the most beautiful orchid now under cultivation. Messrs. Buchannan & Son, of L. I., the largest importers of West India Orchids in North America, have in their extensive collection, a West India Orchid, in my opinion, quite equal to Phalænopsis grandiflora or Amabilis. Phalænopsis grandiflora is most readily cultivated, as it grows freely when fixed to a rough piece of wood or cork, with a little moss attached, and suspended in an Orchid house, in a temperature of about 70° when growing ; and a few degrees less when at rest—giving plenty of moisture when growing. Hon. Mr. Van Vorst of Jersey City, who has the largest collection of East India Orchids in this country, grows Phalænopsis, and to great perfection, in pots filled with Sphagnum and broken potsherds, and placed over large pans of water ; over which his other fine orchids are also grown, and are thus protected from insects, that are very annoying under ordinary modes of treatment.

Ensuring Germination of Seeds.

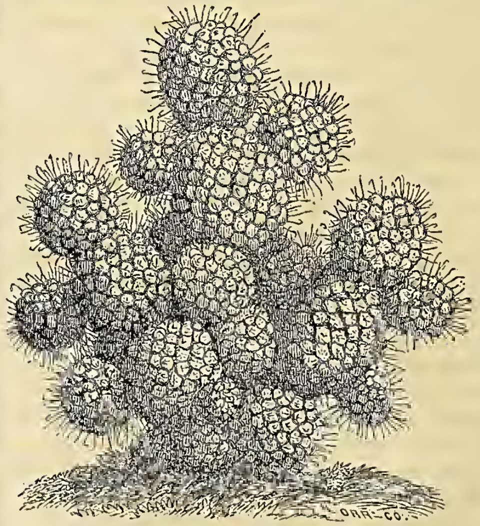
It is often desirable to secure plants from seeds that, by reason of improper packing, long keeping, or other unfavorable influences, have lost much of their vital power, and which can not be made to germinate under ordinary treatment. The following suggestions, which we extract from a foreign publication, are of practical value, especially to those receiving new seeds from abroad:

" If seeds have become sickly or feeble, from age or other causes, some precautions become necessary, to which, under other circumstances, no attention requires to be paid. When the vital energies of a seed are diminished, it does not lose its power of absorbing water, but it is less capable of decomposing it. The consequence of this is that the free water introduced into the system, collects in the cavities of the seed, and produces putrefaction ; the sign of which is the rotting of seeds in the ground. The remedy for this is to present water to the seed in such small quantities at a time, and so gradually, that no more is absorbed than the languid powers of the seed can assimilate ; and to increase the quantity only as the dormant powers of vegetation are aroused. *One of the best means of doing this is to sow seeds in warm soil tolerably dry ; to trust for some time to the moisture that exists in such earth and the atmosphere for the supply required for germination ; and only to administer water when the signs of germination have become visible ; even then the supply should be exceedingly small.* If this is attended to, carbonic acid is very slowly formed and liberated ; the chemical quality of the contents of the seed is thus insensibly altered, each act of respiration may be said to invigorate it, and by degrees it will be brought to a condition favorable to the assimilation of food in larger quantities. Mr. Knight used to say that these effects were produced in no way so well as by enclosing seeds between two pieces of loamy turf, cut smooth, and applied to each other by the underground sides ; such a method is, however, scarcely applicable to any except seeds of considerable size."

The London Gardener's Chronicle states that, by the careful application of the rule above, printed in italics, raspberry seeds which had been buried 1600 years, were caused to grow.

Cactuses.

Few plants more quickly attract attention in a large collection, than the cactuses. Their curious habits of growth, grotesque forms, and brilliance of flower, place them among the most desirable for indoor culture. They have also the advantage of enduring great neglect, being content with the poorest fare, asking only sufficient heat for their comfort. They are all natives of America, being found in the tropical regions, and some of them occupying situations where scarcely any other plant could endure. The most thin, arid, rocky soils, where rain fall is unknown for months, will still sustain the leathery, spiny cactus. The tough enveloping epidermis allows but slight evaporation of the sap, hence but little water suffices for their wants. The number of the different species is quite large. Recent explorers of the proposed route for the Pacific Railroad, found many new cactuses, some of which were marvels of vegetation. They take various shapes, some being mere creeping stems, others having the form of large spiny melons deeply ribbed. The stems of one species resemble hideous green snakes or rather caterpillars ; others, again, ascend with large angular trunks to 30 feet high.



MAMILLARIA WELDII.

The plant here illustrated belongs to the genus Mamillaria, of which there are some seventy species. This is known as *Mamillaria Weldii.* It is easily propagated. One of the tuberculous looking leaves introduced to a pot of soil composed of four parts loam, two of leaf mold, and one of sand, watered once a week during Summer, will need no further attention. It will need the protection of the house and fire heat during Winter and will repay these little attentions by a very pretty show of bloom in the Spring.

Nice Strawberries for 75 cts. a Bushel.

Mr. Pardee says, large, nice, delicious strawberries can be grown for 50 cts. a bushel. Others put the cost at $1 per bushel. Both parties are right, for under some circumstances of soil, locality, etc., they can be produced as low as 50 cts. per bushel, while under other circumstances the cost may be more than $1. But judging from our own experience, and from considerable inquiry and observation, we think the average cost of the large improved strawberries need not be over 75 cents per bushel. We have found no difficulty in getting a bushel to the half rod, in garden culture, and he must be a very poor cultivator, or have a soil not fit for any crop, who could not get a bushel from a square rod. The time required to attend a rod of ground ought not to exceed 50 or 75 cents a year.

Plants of the better kinds are now so abundant that the cost of the small number required to start a bed is hardly to be taken into the account. A dozen thrifty plants, well set out in the latter part of August, or fore part of September, will sometimes furnish a considerable number of new plants for Spring setting; and during the following season they will yield some fruit, and by Autumn, plants enough to supply a neighborhood. (From ten plants set May 1st, we had 600 to 700 plants in Autumn, and after parting with 300 the next Spring, the remainder multiplied to full 10,000 by the Autumn following.) Some kinds multiply much more rapidly than others.

Cultivation.—This is no more difficult than that of corn or potatoes. The whole directions may be compassed in a few words: Dig the soil deep; manure it well with rotten manure; set out the plants with as much care as is required for cabbage plants; afterwards keep the weeds out; remove the runners when they set too thickly; and—pick the berries. Of course a good soil yields better plants and berries than a poor one. A moist, but not wet soil is preferable. If you have plenty of plants, set them a foot to eighteen apart, and keep them well thinned. Just plants enough to nearly cover the ground will yield more and better berries, than a crowded mass of vines and leaves. If you have but few choice plants, set them two or three feet apart, and let them fill up the space. Early in Spring is the best time to set out plants, but you will save a year, now, by planting in the latter part of Summer, or early in Autumn. If to be carried far, the cooler weather after the 10th of September is best; but when to be out of the ground only a short time, a day or so, they can be moved *at any time.* Take them up with as little breakage of roots as possible, dig large holes, pour in a quart or two of water, put the roots in the water, fill up with good soil, letting the top half inch of filling be dry earth to prevent surface baking, set the crown or head a trifle above the level of the bed, and keep the soil off from it. By following this method, we have moved strawberry plants during every summer month, and with little or no loss, and but slightly checking the growth.

Best Varieties.—There are a number of improved varieties of strawberries, any one of which is vastly superior to the common wild kinds. It is desirable to have in every garden as many as two or three kinds, to give variety, and also a longer bearing season. For a single sort, everything considered, we should recommend *Wilson's Albany Seedling.* This is a large, beautiful berry, a great bearer, endures carriage well, and is now so abundant that the plants can be got almost everywhere for $1 to $1.50 per 100. It is rather too acid for our liking, but the prolific bearing makes up for the extra sugar required. Next to the Wilson's Albany, we like *Hooker's Seedling.* On our grounds this is a free grower, bears very well, is a pretty large berry, and the flavor is excellent. It has done better with us this year than ever before. *Jenny Lind.* About the same may be said of this as of the Hooker, though it does not bear quite as freely. The above are all "perfect plants," and require no other kind to fertilize them. *Hovey's Seedling.* This is a beautiful berry, long known, and in many localities has given excellent satisfaction. It is a good market berry, as, from its size, form, and color, it makes a fine show. It is a pistillate, and therefore requires some staminate or perfect kind growing near, to fertilize it. *Longworth's Prolific,* a "perfect variety," is a free grower, bears abundantly; berry large, but not equal to Wilson's Albany in productiveness, beauty of form, and not superior to it in flavor. *Peabody's Seedling* still continues to do well with us, and we know of several persons who place it in the highest rank. We like its fine pine flavor so well that we should be loth to part with it; but in most places its reputation for poor bearing is such, that we can not recommend it for general culture. We have a dozen other varieties in cultivation, but are not yet prepared to positively recommend any of them to those who grow strawberries for their own use only. The foreign sorts, Trollope's Victoria, Triomphe de Gand, and a few others promise well. Those above named will furnish a sufficient variety of good, well tried kinds.

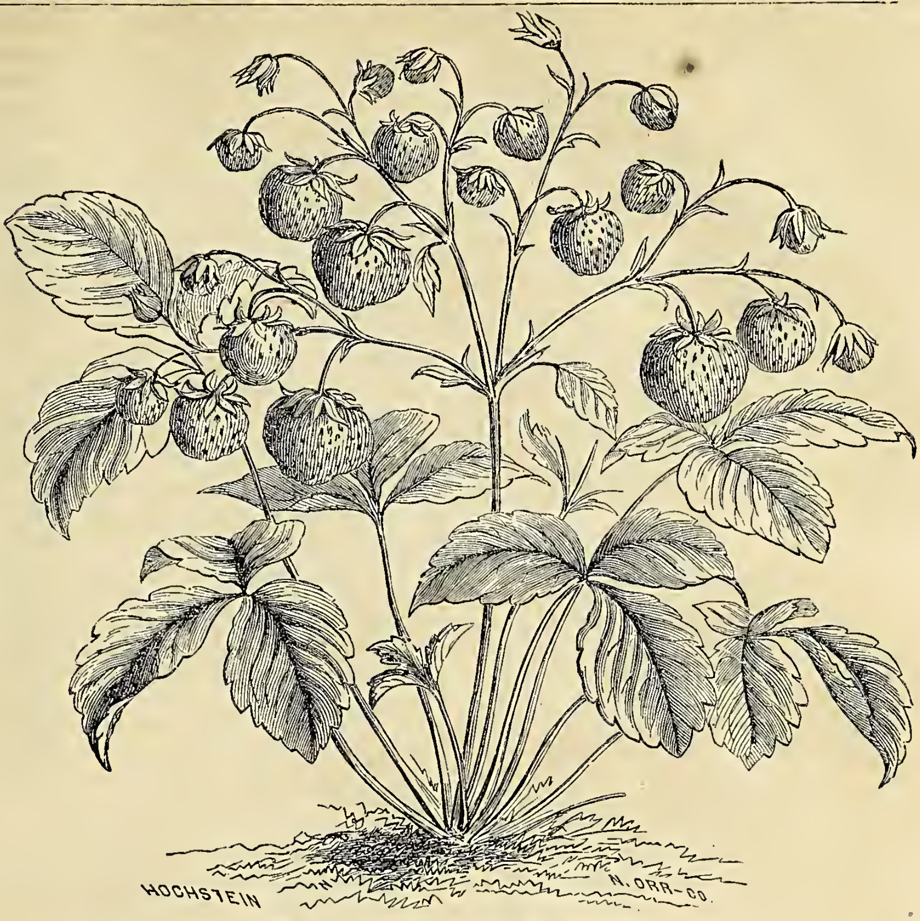


Fig. 1—AUSTIN SEEDLING STRAWBERRY.

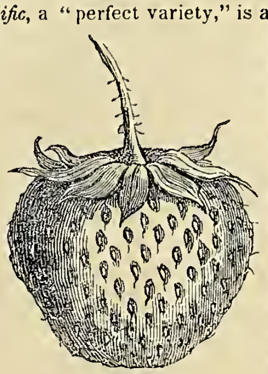


Fig. 2.

"*The Austin Shaker Seedling.*"—Among the new varieties offered to the public this year, is the one bearing this name. The claims of the propagators were pretty fully set forth in our advertising columns, in June and July, to which we refer the reader. The proprietors are doubtless conscientious in the belief that this variety surpasses all others—at least they have manifested their sincerity by their method of bringing it before the public, as they have promised to consider no orders binding until all persons ordering have seen the plants and berries, and become satisfied as to their merits. According to announcement, both the plants and fruit, (two fresh supplies per week,) have been on exhibition at our office since June 18th. We have sketched, and engraved, on a reduced scale, the first plant exhibited here. Several of the leaves are omitted to show the fruit, and only one fruit stalk is represented. Figs. 2 and 3 are exact sketches of the size and form of two average sized berries taken from the first lot of fruit. Those since sent in have averaged larger. An intelligent friend who has recently visited Watervliet, tells us that all the berries on the entire plot of ¼ acre, will average larger than these here shown. The plant is hermaphrodite or perfect, very thrifty, the leaves large, and the fruit-stem strong and tall, which are very desirable qualities. The color is light scarlet, which is also in its favor. Judging from what we have seen, and from the reports of unprejudiced friends who have, partly at our request,

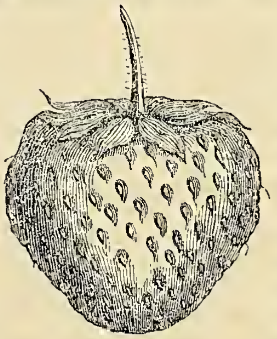


Fig 3.

and partly on their own account, visited the original plot, there seems to be no doubt that the plants are strong and prolific, and the berries average large in size. It is much later than other varieties, and on this account it will be useful to prolong the strawberry season. Of the *flavor* we can not speak so confidently. The specimens we have examined have all been carried 8 miles in a wagon, and 150 miles by railroad, and not received until at least the second day after picking. They do not appear to bear this carriage as well as some other varieties, and the flavor is hardly A, No. 1. Still those who have visited the grounds, and eaten the fruit from the vines, speak well of it. The original bed is covered with a thick mass of vines and leaves, which doubtless affects the size and flavor. We shall not discourage its introduction and trial by all who can afford to do so.

Cauliflowers.

Cabbages are good, but cauliflowers are better. They are sweeter, more delicate and suited to a refined taste. Not a few persons like the flavor of cabbage well enough, but find it hard of digestion. Let all dyspeptics eschew cabbage, and take to cauliflower.

In raising this esculent for Fall and early Winter use, sow the seed the last week in April in a cold frame, or spent hot-bed. Take pains in selecting seed; for much home-grown seed is defective, owing to the excessive heat of our Summers—that raised in the milder climate of Europe is more reliable. It is said that the English prefer Dutch seed, and the Dutch prefer English; but let us make sure of *good* seed, whatever its nationality. After the plants are up, give them plenty of air to make them strong and stocky. Don't be in a hurry to hasten their growth, otherwise they will head too soon, and split into numerous sprouts, instead of forming one large, compact, tender, and brittle globe. Transplant about the first of June, two feet apart each way, setting the plants pretty deep, so as to prevent their being threshed about by the winds. The situation should be open and sunny. Keep them away from trees, fences, or buildings. Give them a rich, porous and well worked soil. Probably the very best ground is new land, well manured from the barn yard, seasoned also with a dressing of burnt sods and other vegetable refuse.

We question somewhat the practice of heaping up the earth around the stock during summer, for if the season is damp and hot, the stem is apt to decay from its over succulence. The whole surface, however, should be frequently hoed. If the Summer is quite dry, mulch the ground with a coating of long manure, and dash upon this, once a week, the wash from the sink and chamber. If the leaves droop at all, it is a sure sign that more moisture is needed at the roots. Very fair growths can be got without this trouble, but superior heads come from this management—heads fifteen inches in diameter, tender and crisp, and nearly as white as snow.

If any plants do not complete their heading before hard frosts, they may be lifted and set in earth in the cellar, where they will continue to improve in size until past mid-winter.

To cook the cauliflower well, put the heads into a dish of hot water, in which a tablespoonful of salt has been dissolved. Let them simmer slowly for an hour, then drain them in a colander; have ready a few pieces of toast to lay them on, and pour over the whole some melted butter.

Among the best sorts for early use is the *Early Paris*; for late use, the *Le Normand.*

For the American Agriculturist.

Refinement Among Farmers.

[We trust the suggestions of the following communication will not be read carelessly—they should be pondered over.—Ed.]

If Agriculture has ever seemed, in the eyes of the superficial, an occupation inconsistent with refinement of taste, it is because the farmer himself generally thinks he has no time for any thing of the kind. But it is a mistake; a little attention to the civilities and amenities of life, will not make him the loser of an hour in the course of the year—for he will reap a large interest for a small expenditure of time. What is so often enlarged upon, need not be repeated here, that a constant field is opened for observation and experiment in the culture of the land; but it is to be desired that among so many intelligent farmers as abound in our country, there were more who cultivated the refinements of life, and made their calling less repulsive to observers. There are farmers who *can* blend profitable labor with refinement, not mere city conventional forms, which are oft'times burdensome, and from which it is sometimes delightful to be freed amid the liberty of the country, but those little courtesies which make home attractive. There are very many farmers—men too who are kind husbands in the main, who would like, when possible, to aid their wives in their most arduous business—who yet think it effeminate, or wasteful of time, or an evidence of pride, to put on for their families, the appearance of neatness and cleanliness, when assembled around the table or the hearth. They wash their faces and hands, but the copious streams which their honest occupation has caused to moisten their garments, soiled as they must be by their business, need a little attention, and it is not necessary that they should render the meal distasteful, by appearing coatless, collarless, or cravatless—or bring with them the perfumery of the stable on their shoes.

Only let the farmer express the wish, and his tidy wife will have all that is convenient in readiness, with a clean pair of slippers kept close at hand, so that they may be slipped on in a minute. Let his men know his example must be followed, and the farmer's table will be very different from what we often see it. The gathering of the family around the board, however frugal that may be, may either be a scene of great discomfort, or it may be a sweet blending of the finer feelings of our nature. Hurriedly, without any regard to courtesy, the meal may be dispatched, little talked of but business, and the rough and uncouth appearance of the male part of the family rendering the repast almost repugnant to the neater members of it. Another, who knows how to arrange his business so as to feel calm and quiet at his table—takes a minute or two to adjust his dress, and by his cleanliness shows he respects the feelings of his family, and in the love of order thus expressed, finds his reward in a well-ordered dinner by those who will not be behind the husband or father in neatness.

They have paid respect to each other, and are prepared to make the meal more than a feeding—it is a social pleasure. Such farmers we have known, and they were prosperous, losing no time by attention to these little courtesies; but they were systematic, and received the summons to their meals a few minutes before the time, and they promptly attended to it. "Ridiculous;" says some readers, perhaps, "it is only pride. Can not my wife love me, when I dine in my soiled shirt sleeves and bare throat, if I get this soiling in working for her?" Yes, my friend; but remember she toils too, perhaps harder, for her strength, than her husband does—and after her late labors are over, she sews for him and the children; and yet she may retain a portion of her early love; but depend upon it, she would value her husband more, if he took a little pains to make himself more agreeable. Now, we do not suppose this farmer to have a slatternly spouse, *she* deserves nothing but to sit opposite a coatless, collarless clown. This harsh term is not designed for all who are negligent as we have described, because, without doubt, there are farmers of delicate feelings, and sensitive minds who only need to have attention called to the subject. But the young woman of whom we are speaking, we think of as nice and tidy. She was won by a spruce young man, who, when he went to see her, had his coat brushed, his collar spotless, and his shoes faultless, and in her simplicity, she thought he would always seem as he did then. Perhaps she had seen her father and brothers look as unwashed, and she may have sooner become reconciled, but she felt a pang of disappointment the first time he who hitherto paid her the respect of regarding personal appearance, shewed her that these delicate attentions were ended. It has been our lot to see a young bride taken from a home of refinement, subjected to this trial. She thought in sharing the toil of her chosen one, he would share her feelings, and pay deference to her tastes. But the too prevalent notions that work and refinement of manners are incompatible, has made her a domestic slave and she has yielded to her fate. She, of course, loses in such companionship.

"As the husband is, the wife is; thou art mated to a clown,
And the grossness of his nature, will have weight to drag thee down."

It is no trifle to study the tastes of our families; by so doing we are repaid sevenfold. By the one course we have described, farming life is rendered repulsive to many, particularly to females, who are often more ready to accept the offers of those who are engaged in other business. By the other course, agriculture takes its right position as a high, refined, and independent pursuit, capable of calling forth man's best energies, rendering domestic life a scene of comfort and happiness.

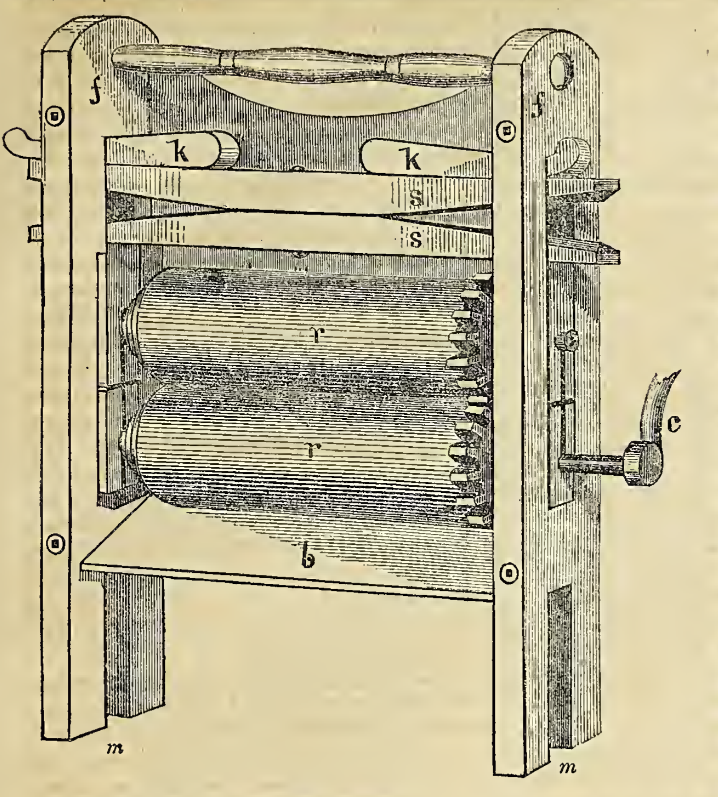
Martha.

A Note from the Doctor.

Mr. Editor.—I did not intend to say anything more about *overwork*, but I find in "the Professor's Story" (which is written you know by an eminent physician) a passage so much to the point concerning it, that I can not refrain from quoting it. So here it is.

"An overworked woman is always a sad sight sadder a great deal than an overworked man, because she is so much more fertile in capacities of suffering than a man. She has so many varieties of headache—sometimes as if Jael were driving the nail that killed Sisera into her temples—sometimes letting her work with half her brain while the other half throbs as if it would go to pieces—sometimes tightening round the brows as if her cap band were Luke's iron crown—and then her neuralgias, and her back-aches, and her fits of depression, in which she thinks she is nothing, and less than nothing, and those paroxysms which men speak slightingly of as hysterical—convulsions, that is all, only not commonly fatal ones—so many trials which belong to her fine and mobile structure, that she is always entitled to pity, when she is placed in conditions which develop her nervous tendencies."

I shall let this quotation stand by itself, only commending it to the thoughtful consideration of your readers. P. H. E.



Machine for Wringing Clothes.

Here is a first-rate implement, and no mistake about it. A month ago Mr. Lyman sent us from Yankeedom a small apparatus, 14 inches high, 12 inches wide, and 5 inches thick, and wished us to set it upon the edge of our Metropolitan wash-tub, or any other wash-tub, and try it for wringing out clothes. It did not strike us very favorably at first, and we were disposed to partly attribute the good story he told of it, to his usual enthusiasm on getting hold of something new. However, as it cost us nothing, not even the express charges, (which is more than we can say of many a useless gim-crack sent to us), we could do no less than take it home for a trial. Well, we like it; our better half likes it; and—to say a big thing in its praise—our "help" liked it on the first trial, though she belongs to a class constitutionally opposed to any new-fangled machines about the kitchen. Next to the sewing machine we consider it the greatest woman's-labor-strength-and-health-saving-implement we have seen. And further, it is a decided economizer in the wearing out of garments. Every one is aware that in the usual method of wringing out clothes, the twisting process stretches and breaks the fibers materially, and wofully strains and tires the hands, arms, and shoulders. All this is saved in this new machine, for the garments are simply passed rapidly between two soft, elastic india-rubber rollers held together by springs, and they come out quite as dry as they can be wrung by hand. They are not twisted at all, but simply pressed. The operation is equivalent to pressing the pieces between the soft hands with sufficient force to remove the water, and of course there is no stretching or tearing the fibers as in the usual process of wringing. As an experiment, we showed the wash-woman how to work it, by passing two pieces through. She then took hold and passed through a miscellaneous assortment of 3 dozen garments, of various sizes, from a baby's stocking to a woman's dress. The articles dropped into a basket, ready to hang out. The time required at the first trial was 4½ minutes. The garments were then thrown back into the water, and she wrung (or pressed) them again in a trifle less than 3 minutes, and with less weariness than would be required to wring out a single sheet.

After this, why should we not be enthusiastic, (in behalf of our fair readers,) over this new implement? One thing more would make our satisfaction complete, and that would be to have the new machine sold at so low a price that every woman could purchase one immediately. We have talked the matter over with the manufacturer, and tried to figure out a lower price, but he assures us that they can not be got up so as to be retailed for less than $10 *if well made.* As an item in the expense he informs us that the india-rubber for the rollers alone costs $3, as it must do from the quantity required. But even at $10 the machine is a profitable one, on account of the saving in wear and tear of fabrics, to say nothing of the saving of labor.

Description.—The machine consists of an upright frame, *f, f,* in which two rollers *r, r,* are set. A crank, *c,* on the axle of the lower roller enables the operator to turn them, they being connected by cog wheels at one end. The cogs are long so as to still fit into each other when the rollers are pressed apart by large garments. The pinions or ends of the rollers move up and down in slots in the frame. The body of the rollers is made of a thick layer of vulcanized india-rubber, and the cog wheels are of galvanized iron to prevent rusting the clothes. The amount of pressure given by the rollers is regulated by stiff wooden springs *s, s,* above them; the ends of the lower spring rest upon the side pieces into which the axles of the rollers are inserted. By moving the wooden keys *k, k,* the springs *s, s,* are made to act more or less forcibly upon the rollers. The lower board, *b,* is inclined so as to carry the water back into the tub.

To use the wringer the mortices *m, m,* are slipped down upon the edge of the wash tub as shown at Fig. 2; the end of a piece of clothing is presented to the rollers, the crank turned, and the cloth is drawn through, and falls upon the other side ready to hang out to dry. The water is squeezed out and falls back into the tub. By loosening the keys, the springs and rubber yield sufficiently to admit the passage of a large garment, while the elastic rubber operates upon the smallest article. If desired, the garments can be made as dry as pressure can make them by running them through a second or third time with the keys pressed in. The long lever (crank) makes it easy to use a great pressure, while the elasticity of the rubber and springs prevents crushing the most fragile button.

We have thus spoken strongly in favor of this valuable implement, against which we were at first prejudiced, because we think we are doing a favor to our readers. All the return we ask of the manufacturer is that he get up the machines rapidly, make them in the best manner, and sell them to *our* readers at the lowest possible price. If he don't do this we shall pitch into him, if we can't into his machines.

Hints on Cooking, etc.

The following three were contributed to the *Agriculturist* by A. M. P.

Cheap Sponge Cakes.—Two eggs, 1 tea cup flour, 1 cup sugar, 1 large spoonful sweet milk, ½ spoonful soda, 1 tea spoonful cream tartar, a little salt, grated rind of one lemon, 1 tea spoonful of butter. Bake fifteen minutes.

Boiled Suet Pudding.—One cup of suet finely chopped, 1 of raisins chopped, 1 of milk, 1 of molasses, and a little salt. Stir in wheat flour until it is of the consistency of stirred cake. Boil three hours; serve with sweet cream.

Omelette.—Four eggs, 1 tea spoonful of butter cut in bits, 1 large spoonful milk or cream, salt and pepper to taste. Put a piece of butter, half the size of an egg, in the pan—which should not be too large, to allow it to spread too thin—let it melt, break in one slice of bread, crumbled fine, and two large spoonfuls of cream. Beat the eggs well, stir them in briskly for a moment, let it cook about five minutes, then fold it over, and turn out. This, with ham, makes a nice dish for the breakfast table.

Yeast.—Mrs. H. Jessup, Chautauque Co., N. Y., recommends to the readers of the *Agriculturist* her method of preparing yeast, which is as follows: To any quantity of water desired, add sufficient hops to make it very strong, and let it steep slowly two or three hours. Then boil it a few minutes, strain out the hops, put the liquor back in the kettle, let it boil moderately, and add flour until a stiff batter is formed. When thoroughly scalded, put it in a jar to cool, and while a little warm, add yeast to ferment it. When well fermented, add to two quarts of the yeast, a half tea cup of salt. Keep it in a cool place. A tablespoon twice full will make sponge for a half dozen loaves of bread. Yeast made in this way will not sour.

Flour Pudding.—Contributed by M. Smith. Mix 4 eggs with 4 cups of sweet milk and a table spoonful of butter, and stir in 2 cups of flour. Bake it ¾ of an hour in a quick oven, and serve with sauce of butter and sugar well mixed, with a little wine if desired.

Tomato Figs.—Contributed by H. Wade, Floyd Co., Iowa. Place tomatoes in boiling water and leave them until the skins burst. Drain off the water, and add sugar enough to cover them, when it is melted. Boil slowly for an hour, skim out the tomatoes carefully, and drain off all the syrup: then pack them in sugar. When dry they closely resemble genuine figs.

The Editor with his Young Readers.

MISCHIEVOUS TOM.

Thomas G. was naturally a pleasant, sprightly lad, full of frolic, and seldom at rest. He must be busy, either at work, innocent play, or mischief. His mother, a good natured but rather careless woman, often found her patience severely tried by "Tom," as she called him, for in his search after amusement, he was, as she declared, "into every thing." When he had trapped all the rats in the cellar, and the mice in the closet, he would fix snares for the chickens in the barn yard, or inveigle the cat into a bag, and amuse himself by watching her struggles. He knew the contents of all his mother's closets, trunks, and bureaus, better than she did sometimes, for when she wanted cloth for patches, or strings for tying bundles, she often found Tom had used the patches to make sails for his boat, or a tail for his kite, and the strings had been taken to harness his imaginary horses. If his mother could have taken more time to keep him innocently employed, or had corrected him when he was guilty of mischief, he would have been less troublesome; but she was a widow, obliged to work hard for a livelihood, and had little leisure to look after him. He was her only child, too, and she could not bear to punish him even when he deserved it, so he did about as he pleased. Fortunately his home was in the country, with no neighbors very near, and he did not have bad boys as companions; had this been the case, he would soon have been ruined.

But although he was thus neglected, he often found that mischief brings its own troubles. He was once severely burned while playing with the lamp, when left alone a few minutes. The burning fluid was spilled and took fire upon his clothes, and he narrowly escaped losing his life. Once, too, he fell into the well, while throwing in a hatful of frogs he had caught, but as it was not very deep, he was only badly bruised, soundly ducked, and greatly frightened.

His last scrape is shown in the picture above, which we found in Merry's Museum. He was invited by his uncle, who lived in a neighboring town, to spend a few weeks at his place, with which, as you may suppose, he was greatly delighted. His uncle was wealthy, and had no children; and it was his intention, if he liked Tom, to take him for his own, and educate him. If Tom had known this, perhaps he would have taken pains to keep out of mischief; but, as usual, he at once commenced to explore the place in search of adventures. First he roamed through the garden, and helped himself to such fruit and flowers as he fancied, but the gardener spied him, and soon drove him out. Just beyond the garden gate the bees were kept. Tom had never seen a hive of them before, and was much interested at first in watching their motions as they buzzed around the hive, or flew away to gather honey. He soon became tired of this, and, just for sport, thrust a stick into one of the hives. Poor fellow, in an instant the enraged bees poured out and attacked him, stinging him as he ran, until he roared with pain. He was so badly stung that he was confined to his bed for more than a week. His uncle, who was a kind hearted man, took occasion, as he recovered, to talk with him about his mischievous propensities, and Tom was quite ready to believe that such sport cost more than it was worth, and since then, when he has been tempted to do mischief, he has thought of the stings, and restrained himself, and he is now in a fair way to grow up a good and useful man.

Perhaps there may be boys or girls among our young friends who are ready to seek enjoyment from what they know is not exactly right, when they think it can be done without the fear of punishment. Wrong always has a sting—if not like that of the bee to pierce and poison the body, it will yet rankle like a poison in the mind, and destroy happiness. It will be much easier and better for them to learn from the experience of Tom, and of others like him, that the *right* way is the best way, than to suffer the penalties themselves.

A STARTLING REPORT.

A clerical friend relates the following which happened to himself a few years since. He was just passing from boyhood to manhood, and had lately appeared in his first "long tailed" coat. One Fourth of July, dressed in his best, he passed part of the day with a party of young ladies, and, for his own amusement, he purchased a quantity of torpedoes. Some of you may not have seen these. They are small bits of paper containing gravel, and a substance called fulminate. When one is thrown forcibly upon the floor, or against a hard surface, it explodes with a noise nearly as loud as a fire cracker. Our friend had much sport in throwing these about and making the ladies start, for which he was afterwards punished nicely, as you shall hear. At the close of the day, he had a parcel remaining, containing about one hundred torpedoes, which he left in the pocket of his long tailed coat. The next Sunday, he dressed for church, without thinking of the torpedoes, which of course he carried there with him. Taking his usual seat in the choir, he soon became interested in the singing, which he says was unusually good that morning. A piece had just been finished, the congregation were seated, and the minister was about engaging in prayer. All was hushed into perfect silence, when a tremendous report startled the congregation. Some thought a musket had been discharged, others, that the gallery was falling—only our young friend knew the truth—he had sat upon his torpedoes, and all exploded together. Fortunately no injury was done, except to his nether garments; but for a long time he always turned very red in the face, when any one asked him about torpedoes. You may be sure that after such a mishap, he always examined his pockets carefully before going to church, to see that they contained no explosive materials.

HAPPY JACK.

A correspondent writes as follows: The story in the July number of the boy who was so afflicted by the loss of his whistle, reminds me that we have in this place, Brooklyn, N. Y., a cartman who has whistled himself into notoriety, and a comfortable living. He is a stout, burly fellow, with a skin black and shining, and a countenance beaming with good nature. His happy face and pleasant manner have won for him the name "Happy Jack." He is very kind-hearted and a great favorite among children. You can always tell when he is coming up the street on his cart, by the peculiar, clear, ringing, chirrupy notes with which he whistles his few favorite tunes. He can perform almost anything in the whistling line, but prefers to practice but few tunes in public, probably with an eye to attracting attention, for he is as shrewd as he is good natured. As he passes through the streets, the little children call after him, and he bows, shouts, laughs, and whistles to them, until out of sight. I have seen group after group of children salute him, for they all know him, and he has a pleasant reply for all. This is his way of advertising, and Barnum or Bonner could not succeed better than he has in attracting public attention. Consequently, as he is a careful cartman, he has abundant employment, besides enjoying life more than most of his class.

NEEDED MEDICINE.

Nothing is more ridiculous than for young people to "put on airs." They are fair game for jokers. The following shows how one of this class was "taken down."

Some twenty years ago a farmer's barn in the vicinity of Worcester was struck by lightning and burned to the ground. Many of the citizens had gone to the fire, when a fop, well strapped and dickied, with his cap on one side of his head, met the celebrated Dr. G—n, and accosted him in this wise:

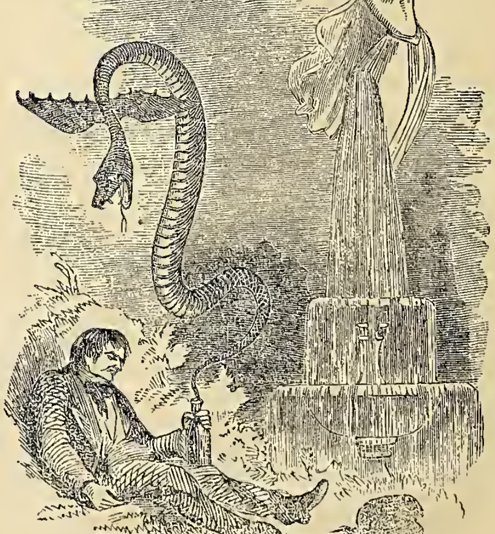
"Can you—ah, tell me, doctah, how fah they have succeeded in extinguishing the conflagration of the—ah, unfortunate yeoman's barn?"

The doctor eyed the individual attentively, dropped his head as usual for a moment, and then slipping his thumb and finger into his vest pocket, took out a couple of pills and handed them to him, saying—

"Take these, sir, and go to bed, and if you do not feel better in the morning call at my office."

BEWARE OF THE SERPENT.

Can you read this picture? We have rarely seen a more expressive one. How well it represents that verse written by the wise King. "Look not upon the wine when it is red, when it giveth its color in the cup, when it moveth itself aright. At the last, it biteth like a serpent, and stingeth like an adder." That poor inebriate has already been fearfully bitten by the serpent, Alcohol. His body is enfeebled, his mind stupefied, his sense of shame gone, so that he can lie in a drunken sleep by the roadside, the sport of the thoughtless and the pity of the kind-hearted. The spirit of Temperance hovering over the fountain of pure water, looks mournfully upon him as though she would gladly restore him to happiness with the cup of life she holds.



But, you may say, do such horrid looking snakes ever come out of the bottle, and attack the intemperate? Yes—In that dreadful disease called delirium tremens, caused by intemperance, the sufferer sees or imagines he sees serpents, demons, and many other horrible shapes coming to attack him. The writer once took care of a man affected in this way His groans and screams were fear ful, and although what he feared, was only imaginary, to him it was as terrible as the reality could be.

But why do men drink that which is followed by such horrors? Because they see no danger at first. A little wine or other pleasant drink is taken occasionally, then daily; thus habit is strengthened. The appetite increases by indulgence, and if not restrained, the serpent's bite is felt at last. Boys and girls—God made the best drink that can be furnished—it is healthful, safe, and refreshing, and nothing can quench thirst so well. If you would grow up strong, virtuous, and happy, drink water. Touch not, taste not, handle not any thing that can intoxicate.

DOG AFRAID OF NOISE.

One of our young friends is in much trouble about his favorite dog. He writes: "Whenever he hears fire-crackers, a gun, thunder, or any thing of that kind, he will run into the house and as far up stairs as he can get. When we try to get him out he is almost crazy with fear. Yesterday we shut him out of the house, and he heard a cannon, and he jumped right through a glass door and broke the sash all to pieces. He is a large Newfoundland dog, and was two years old last March. He is a very valuable watch dog except for that one thing. I don't want to dispose of him, for we are so much attached to him. If you or any of your readers can tell me how to cure him I wish you would do so."

We do not know that your dog can be taught better; he is probably too old, and you know the old adage "you can not teach an old dog new tricks." However, we should *try* something like this. Just before feeding him every day, explode a torpedo or fire cracker, so that he may expect something pleasant after hearing it. When he becomes accustomed to this, try him with some louder noise, as a pistol or a gun, and in time, perhaps he may not only lose his fear, but like the sound. We have seen dogs leap and frolic with pleasure at sight or hearing of firearms, from having been accustomed to hunt with their masters, and to share the spoils of the chase. Perhaps if the cowardly dog were associated for a while with a courageous one who could stand fire, he would be shamed out of running away. Dogs as well as boys learn many things from their companions.

LANGUAGE OF FOWLS.

Mr. C. N. Bement, whose writings on poultry you have occasionally seen in the *Agriculturist* contributes the following interesting communication about the way turkeys and hens "talk."

Turkeys have a language of their own, well understood by themselves. It may not be Greek, or Hebrew, or Dutch, or Esquimaux, but it answers their purpose; and by it, young and old will learn to communicate their thoughts to each other in far less time than small children in an infant school will learn the elements of our vernacular dialect. By a particular nod—to them, it is a word—or whistle, or sound, uttered by one of the flock, should there be fifty of them, all will stop feeding, and look up to learn what is wanted. This will be invariably done if the old cock or one of the older hens should discover a hawk a mile distant in the air. How do the turkeys know the character of those Goths and Vandals of the feathered races, before they have expeperienced their ravages? They apparently know it from instinct.

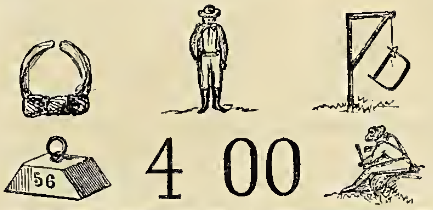
My turkeys are mostly fed on Indian corn. One morning the man who has charge of the poultry, took some corn which had been wet and left in a barrel and become a little moldy, and commenced feeding by scattering it on the ground for the turkeys, as he had frequently done before. All as usual seemed delighted with their fare. There was great scrambling among them, old and young, apparently to see who should get the most. All at once the old cock did not like the taste of it. He suddenly suspended operations, first turning his head half way round to take a more careful view of it with his right eye, then the other way to scrutinize the suspected grain with the left eye. This was repeated several times with as much of an air as the school boy will look through a piece of smoked glass to observe the sun in an eclipse. Quickly he became satisfied that something was wrong about the corn; this mold might be poison from the apothecary shop for aught he knew; it might have been prepared to kill the villainous rats, and by accident given to the honest turkeys—at any rate, he deemed caution necessary, and resolved to give the alarm. He did so by one of his peculiar sounds and nods, which have not been translated into the English language, holding up his head and looking as wise as the bronze Statue of Confucius. Anon the old lady turkeys stopped eating, held up their heads, and repeated the same signal of danger. All then, old and young, stopped eating, and held up their heads apparently asking what was the matter. The old cock now again turned his head this way and that way, first to inspect the corn with one eye, and then with the other, for them to see. The rest all did the same with much accuracy, and in five minutes they all left without eating another kernel.

Hens are like folks. They look, act, and talk like folks—that is, like a great many folks we all know. There's one now with precisely two feathers in her tail, by actual inventory, and the two sticking directly up like a couple of oars in a fishing boat. She's a fussy little body, and goes clucking around with one chicken about the size of a wren, quite unconscious of the figure she cuts, and the ridicule she provokes wherever she goes. Who don't know some body "as like her as two peas." She's everywhere, in every thing; has "a word in season," and out, and for that the "*outs*" have it. Nothing going on, that she is'nt there, and has'nt something to say, with her short steps but a great many of them. Only glance at that wonderful chicken of hers and she's all of a clutter; ruffles her feathers, and looks—so she thinks—very formidable. She is too tough to eat or she would have been guillotined long ago.

The great cry when an egg is laid, is as good as an announcement in the London Times. The alarm when a wing, somewhat broad, sweeps over the barn yard, is as significant as the old Saxon Tocsin. The call of something "found," is quite as intelligible as the town crier with his bell. The defiant voice of the cock is a challenge in honest vernacular, and the triumphant crow is a "*hurrah*" in plain English. The mother's incessant "cluck," "cluck," with her family, is veritable "*baby-talk*," while her tones gathering the callow wanderers together, are as full of love as an old ballad. And the notes of the chickens too! There is not a rural sound softer and sweeter than the home notes of the little creatures when nestled at night beneath the mother's brooding wing.

NEW PROBLEMS.

No. 21—*Original Rebus*, properly read, gives an old adage.



No. 22—*Word Rebus*, by T. M. Hequembourg. The Gr 8 B ing M T aim an put:.

No. 23—*Enigma*, contributed by a subscriber, who does not know the answer—neither do we—perhaps some of you can find it out.

It is as high as all the stars,
No well was ever sunk so low,
It is in age five thousand years,
But was not born an hour ago.

It is as wet as water is,
No red-hot iron e'er was drier.
As dark as night, as cold as ice,
Shines like the sun, and burns like fire

No soul, nor body to consume,
No fox more cunning, dunce more dull,
'Tis not on earth, 'tis in this room,
Hard as a stone, and soft as wool.

'Tis of no color, but of snow,
Outside and inside black as ink;
All red, all yellow, green and blue—
This moment you upon it think.

In every noise, this strikes your ear,
'Twill soon expire, 'twill ne'er decay
Does always in the light appear,
And yet was never seen by day.

Than the whole earth it larger is,
Than a small pin's point 'tis less,
I'll tell you ten times what it is,
Yet after all, you shall not guess.

'Tis in your mouth, 'twas never nigh,
Where'er you look, you see it still;
'Twill make you laugh, 'twill make you cry,
You feel it plain, touch what you will.

ANSWERS TO PROBLEMS.

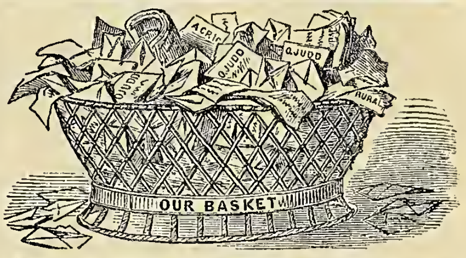
No. 18—*Original Rebus.* The solution is: th in k twice before u's pea k on ce—or, Think twice before you speak once. Read correctly by F. E. Pearce, B S. Payson and sister, S. Henry Hickok, T. M. Hequembourg, Isabella C. Miller, E. D. Farr, Oppey Dondow, Otway B McCluire.

No. 19—*Puzzling Bill*—Taking the "cockneyism" out, it reads:

Alf. Hall
To A. Howel Dr.
To a horse half a day........................5s. 6d.
" getting him home........................2s. 0
7s. 6d.

Answered correctly by C. C. Dunlap, J. Oscar Teel (let us hear from you again,) F. E. Pearce, "Edward," Wm. Joyce, John Yales, N. H. Nebaugh, B. K. Northrup, S. Henry Ward, B. F. Wallis, Giles E. Stillwell, D. F Balph, T. Rogers, Otway B. McCluire, Wm. Macy.

No. 20—*Arithmetical Problem.—Answer*, 23 hours 5½ minutes. Solved by J. Oscar Teel, Edward Follett, N. H. Nebaugh, B. K. Northrup, F. F. Wallis (we have never seen such a *lusus naturæ* as you describe), Charles Farquhar, W. T. Adams, Harrison Frizelle.



Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

Errata.—In describing the orchid, on page 177, June No., *Lycusta* should have been printed Lycasté, and the description credited to Dr. *James* Knight instead of Andrew Knight, as there stated.

Disease among Cows.—Wm. B. Cary, Essex Co., N. J., writes as follows: "A number of cows in this vicinity have lately been taken down with great pain just after calving, and died in a short time. The disease has baffled the skill of the cow doctors about here. I made an examination of the last one lost, and found the heart considerably enlarged and slightly discolored (yellow), the lungs the same, the liver somewhat swollen, but natural color, the fat about the kidneys discolored a little. When she was first opened, the heart, etc., were lying in a pool of blood, from where I don't know. The external symptoms are: the animal is unable to stand—groans with much pain and is very uneasy, eyes lose their brilliancy, horns cold, the body very much swollen with wind. The calves seem to do well. Two valuable cows have been lost, and the difficulty appears to be spreading. Any information about this disease will be gratefully received by this community."

Raising Locust Trees.—W. Brown, Cortlandt Co., N. Y.—The Yellow Locust makes very valuable timber for fencing and other purposes. It is of rapid growth, and when once interspersed among other trees, gradually gains the ascendency. If practicable to procure small trees or roots, set them out somewhat scattering, and they will soon throw up shoots from the root and multiply rapidly. Seed may also be gathered from the trees, or obtained at seed stores, and sown in the Fall, in a spot especially devoted to the purpose. The small trees can be transplanted therefrom as desired. The more such a piece is dug over in taking up trees, the more they will multiply, as nearly every mutilated root left in the ground will throw up one or more shoots.

Lye for Trees.—James Jenkins, Hancock Co., Ill., writes as follows: "Last Spring after making soap, I took the lye left in the kettle after taking off the soap, and washed the bodies of three apple trees, and liking the effects, this Spring I washed fifteen more. It causes the old bark to scale off, and gives the trees a thrifty appearance. It kills all small sprouts that may be on the trunk of trees or about the roots, and kills all grass upon which it falls. It will not do to use on small trees, without first making it very weak."

Protecting Trees from Sheep.—J. C. Dodge There is little danger of trees being injured by sheep, unless the stocks are very young, or the pasture so scarce that hunger compels them to browse. They can be protected by setting stakes around them. This is preferable to boxing, which excludes light and air.

Hop Tree.—J. J. Hawthorne, Dodge Co., Nebraska. Seeds of these were sent out by parties who supposed they were distributing a good article. They will not all vegetate, even with careful culture. The tree, or shrub, (Ptelia *trifoliata*) is rather ornamental, but for *hops*, the common vine is every way preferable.

Budding Oranges and Lemons.—C. Hoffman, Dauphin Co., Pa. June and July are the proper months for budding the orange and lemon. They would probably bear, after a while, without budding, but this process hastens their maturity, and keeps them of a dwarf habit.

Prolific Gooseberry Bush.—A. Wiley jr., Bergen Co., N. J., left at our office (July 6th) a branch from a gooseberry bush well loaded with fruit. It was 1[illegible] inches long, and spread about the same distance, and contained, by count, 146 gooseberries, weighing 1½ lbs. entirely free from mildew. In size they varied from ⅝ to ⅞ inch in diameter, were of a light color and pleasant flavor. We regret Mr. W. did not know the name of the sort, as a variety so free from mildew should be more extensively cultivated. The branch brought in, was about one-sixth of the growing plant.

Improved Currants.—A number of samples of different varieties sent to our office recently, attest the improvement made in this fruit within a few years. The finest sample received came from Geo. Seymour & Co.—a very large branch of the White Grape variety crowded with thick clusters, the fruit so transparent as to show every seed; flavor very excellent; a promising variety. From the same source, a branch of the cherry currant, some of the berries over 1¾ inches in circumference; the branch perfectly loaded with clusters; flavor too acid for our liking. From Parsons & Co., good specimens of the Versailles, not quite so large as the cherry, but much better flavor.

Standing Cypress, (*Cantua coronopifolia.*)—R. G. Blanton, Hays Co., Texas. The red flower forwarded to this office corresponds with the botanical description given of the plant named above It is very attractive, and would be a desirable addition to the flower border. We are not aware that it has been brought under cultivation. We shall be pleased to receive a supply of seed in their season.

Benefits of Mulching.—J. D., writes that he finds much advantage in mulching the ground around peas cabbages, cauliflowers, tomatoes and many other garden vegetables, particularly when drouth prevails. We prefer this treatment to artificial watering of plants, except where very long continued absence of rain makes it absolutely necessary. Every one must have noticed that the surface of the ground covered by a stone, a board, or even a layer of straw, is almost invariably damp, free evaporation of the water rising from the deeper soil, having been prevented. Give the ground to be mulched a thorough hoeing to clear it of weeds and facilitate the ascent of moisture, and apply an inch or two of loose straw, hay, sawdust, or other light material that will not exclude air.

Chinese Sugar Cane and Imphee.—J. W. Deupree, Davis Co., Iowa. The Chinese is the taller plant, and has *black* seeds, while the Imphee has *light* colored seeds, very much resembling broom corn. The joints of the Imphee are also closer than the Chinese cane. An attempt was made to cultivate the Imphee, but the seed brought here was not pure. We doubt whether it will prove valuable; our own limited experimenting with it was not satisfactory, and latterly we have heard little of it.

New-Jersey Lands.—"Subscriber," Hamilton Co., O. The extensively advertised tracts of land in New-Jersey, which yourself and many others write to inquire about, offer no inducements to settlers, especially not to those who can do far better in your rich western territory. Several parties from New-England, who, in behalf of themselves and others, went to spy out the land, have called on us on their return, but they brought no clusters of grapes, and don't believe any one else will bring any. They think the advertisers need a particular blowing up—and perhaps they will get it. Of the Tennessee lands you inquire about, we know next to nothing.

Superior Milch Cows.—Fleming Hodges, Chickasaw Co., Miss., writes that after careful selection for eighteen years, his milch cows are brought up to the point of yielding each from 20 to 30 quarts per day. His first stock was obtained in Virginia; the breed is not named, but from the description they appear to be grade Devons. No cow has been retained for breeding which did not yield a large supply of rich milk. We suppose, of course, that care was taken to have the breeding *males* also of a good milking stock. As might be expected, Mr. H.'s cows are in demand in his neighborhood. Similar management will secure the same results in any place.

Broad Tail African Sheep.—We recently saw a buck and two ewes of the above breed in the yard of the Rev. Henry H. Garnet, 52 Laurens-st., New-York, which had just arrived from the Cape of Good Hope. They each have a tail which we should judge would weigh some six pounds—a rare delicacy for the gourmand, we are told. The buck is a pure white, one ewe has a touch of black, and the other of bay or buff. This breed in Smyrna and other parts of Syria, where they abound, have all the varieties of colors, "ring streaked and speckled," like those of Laban more than 3000 years ago. Specimens similar to the above were introduced into Pennsylvania during the last century, and the carcasses of their descendants were in great demand in the Philadelphia market till within a few years. Some of our farmers might find it profitable to try a cross of the above on some of our native sheep, as we understand they are for sale at half the cost of importing, say $30 to $40 each. The wool is mostly very fine and soft, with an intermixture of fine hairs.

"The Methodist."—The advertisement of this new journal appears in our advertising columns. We have read the first two numbers, and they indicate that this will be a family paper of the very highest order. It will be worth while for those not prepared to subscribe at once, to at least send for a specimen copy or two, which will be freely forwarded by the publisher.

Some Good Schools are announced in our advertising columns—that of Fort Edward which we have already taken occasion to speak of in the highest terms from our personal knowledge of the Principal, an old college classmate; and the new school just being started by Prof. Hopkins who proposes in addition to the usual routine of study, to give his pupils a practical as well as theoretical knowledge of horticulture, for which he is well qualified; and the Granville Female Academy, Logan Co., Ohio.

Peale's Court of Death.—This admirable painting by our countryman, Rembrandt Peale, is one of the most expressive pictures ever executed. The all conquering monarch, Death, is represented upon a throne, and upon his right hand and left are witnessed the deeds of his swift messengers, war, famine, pestilence, pleasure, intemperance, vice, etc. In another part of the painting is shown the triumph of Christian faith over the terrors of Death. As the original painting can be seen by but few, we very cheerfully commend the enterprise of Mr. G. Q. Colton, who has undertaken the work of furnishing special and accurate lithograph copies of large size for the small price of one dollar. In this enterprise he has adopted the plan pursued by the publisher of the *Agriculturist*, viz: to furnish a good thing at the least possible price, and depend upon an immense circulation for pecuniary reward. The Court of Death will make an appropriate parlor ornament, and the lesson its constant presence before a family will inculcate, will have a valuable moral tendency.

Cook's Portable Sugar Evaporator.—We have already described this implement, and commended its use for making Sorghum sugar, and maple sugar also. So far as we can judge from what we have seen of it in operation, it appears to be the best apparatus for sugar making yet provided. We have before us several samples of beautiful well crystalized sugar made with Cook's evaporator, by O. N. Brainard, of Marion, Iowa, and others. These are strong evidences of the utility of the apparatus.

Ellery's India Rubber Paint.—We have given this a pretty thorough trial, having applied it to the roofs or our dwelling and an out-house, last Autumn, where it has been subjected to Winter and Spring exposure on a surface nearly flat. It stands the test well, and we shall now use it on a new barn roof. The experienced painters who applied it, and who were previously prejudiced against this and other patent compounds, speak of it in high terms, and they, with others who have examined it, are ready to recommend it. We have also examined the specifications of the patent, and the combination of materials appears to be made on scientific principles. It is essentially composed of oil and any desired coloring matter, in which is a considerable admixture of India rubber, gutta percha, and gum shellac. These substances render it elastic, and water shedding. The elasticity is a very desirable quality. The paint is scarcely as expensive as the common oil paints.

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From the Christian Advocate and Journal.

A New Invention.

We notice with pleasure the progress of useful inventions, and especially of such as tend to relieve the constant toil of every day life, and to bring comforts more and more within reach of the masses. In this spirit we have spoken of sewing machines. We have endeavored to examine and recommend in these columns those which seemed to us best adapted for general use, and for becoming the docile and active family servant. We are pleased now to be able to say, from examination and careful tests, that a still farther advance has been made, which lessens the price so as to bring a good article within reach of many who have as yet been unable to procure them; and in speaking of this machine we must say that we have thought until now, if any one thing was settled about sewing machines, it was that a good one must work with two threads. The defects in all the single thread machines hitherto tried have been such as to preclude them from being considered really useful; and we had become fully convinced that the only reliable inventions of this kind for use were one or other of the well known two-thread machines, which have been heretofore spoken of in this paper, although they are from necessity more complicated and expensive than a machine using but one thread.

Our Patent Office reports show that no branch of mechanical skill has been more pursued by inventive genius of late years than that of simplifying and cheapening sewing machines, which has resulted in producing a machine remarkable for its simplicity, which makes a good strong seam, without liability to rip, even when cut into small pieces, by using only one thread direct from the spool. It was not easy to convince us that one thread would produce a seam fit for general use and of reliable strength; but experience has proved it to be so. This machine has been tested in the past two years by private families and by manufacturers. After many experiments with other machines, this one has been adopted by the large hosiery manufacturers of Philadelphia, in whose work a peculiarly firm and elastic seam is required. In our own city a prominent manufacturer of fine muslin and cambric goods, who a year ago was a firm advocate of the shuttle machines, has now discarded their use altogether, and adopted this.

For family sewing in all its varieties, the work of this simple machine is found perfectly strong and reliable; and its hemming is done on the right side, and to any width, and is neat and accurate beyond comparison. Felling also is readily performed by it, and we can not see any requisite for family purposes which it can not be made to meet as readily as any sewing machine in use. It is simple and easy to work, can not be run in the wrong direction, nor is there the slightest difficulty in changing the needle; it is not liable to get out of order, and combines cheapness with its other merits, being sold at thirty dollars.

While, therefore, we abate none of the well-deserved praises we have given to the others, we must in justice express our confidence in the merits of the Willcox & Gibbs Sewing Machine. We consider that a great desideratum has been supplied by it in proving beyond doubt that two threads are not, as was supposed, necessary to a good instrument, and we recommend all who desire to consult economy of time, labor, and money, to go and see it for themselves, and give it a fair examination without prejudice.

Business Notices.

☞ *Sixty Cents a Line of Space.*

ITALIAN BEES.

Pure Queens of this race are now ready for delivery, impregnated by pure Italian drones of which some twenty thousand are flying about the hives. No common drones are allowed in or near the grounds, and my neighbors have kindly allowed me to remove their common bees to a locality distant two miles from my Italians. For terms and other information apply for Circular to

S. B. PARSONS. Flushing, N. Y.

GROVER & BAKER'S
CELEBRATED NOISELESS
FAMILY SEWING MACHINES,

No. 495 Broadway, New-York; No. 18 Summer st., Boston; No. 730 Chestnut st., Philadelphia; No. 181 Baltimore st., Baltimore; No. 58 West Fourth st., Cincinnati. * * *For our own family use* we became *fully satisfied that Grover & Baker's is the best, and we accordingly purchased it."—American Agriculturist.*

☞SEND FOR A CIRCULAR.☜

WHEELER & WILSON'S
SEWING MACHINES.

"The best in use."—*American Agriculturist*, 1860.
Office 505 Broadway, New-York.
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SANFORD'S HEATERS,
Portable or set in Brick,

Are pronounced by the most competent judges to be *the best*, giving the largest amount of heat, with a small quantity of fuel—owing to their being so constructed as to burn the gases and smoke, and with the largest radiating surface so arranged as to warm the air rapidly to a soft summer heat.

Eight sizes, adapted to warming only one or two rooms, or a whole house, churches, academies, public halls, &c.

THEY ALWAYS PLEASE.

THE NEW AIR-TIGHT CHALLENGE RANGE now ready.

Send for testimonials (free) to
SANFORD, TRUSLOW & CO., Manufacturers,
239 Water-street, New-York.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Thursday Evening, July 19, 1860.

The advices from Europe of unfavorable weather for crops, encouraged buyers early in the month to purchase Breadstuffs freely, and prices improved. An advance in rates of freight checked export, and sellers offered their supplies rather eagerly, which tended to depress prices. During the past week, transactions have been restricted, the demand from the home trade and from shippers being moderate. The number of suitable vessels in port is small, and high freights are demanded; latest accounts from England are indefinite, and buyers do not offer freely, except at unsatisfactory rates. Yet, as there are many orders to be filled, leading receivers are not over anxious to anticipate the regular wants of purchasers. Stocks in first hands have been reduced, and current receipts are not unusually heavy. Many pretty well informed merchants predict a diminution in arrivals from the interior, which will favorably affect prices. The first new flour, of choice family extra brand, was received from the Reservoir Mills, near Baltimore, on June 30th. A portion of it was sold on the 2nd inst. at $8.50 per bbl. A sample of a small lot of fine quality new White Maryland Wheat was received on the same date, and sold at $1.70 per bushel. We understand that some of the same kind of Wheat sold in Philadelphia on the 29th ult., for $2 per bushel...... Accounts of crop prospects from various parts of the country are most encouraging. Our latest exchanges, especially those from northern Illinois, southern Wisconsin, and eastern Iowa, agree that, so far as heard, no damage has resulted to the Wheat and other crops from the recent storms. In some cases, the Wheat has been thrown down, but not so as to seriously damage it. No signs of rust have appeared. Many of the papers state that the Wheat crop will be heavier than was a short time since anticipated, the heads having filled up better than they seemed at an earlier time to promise.... There is a very unusual absence of complaints of poor crops, in the extended correspondence of our office...... Cotton has been quite dull and heavy. It has declined ½@⅝ct. per lb. The prospects of the new crop are very encouraging. The weather continues generally very propitious for crops on the bottom lands. On some parts of the high lands rains have also fallen, and from those neighborhoods we have fewer complaints of drouth, while from other portions of the Atlantic States and Texas we hear that the plant is becoming parched from excessive heat. The critical periods of maturing and picking have yet to be passed through, during which, fine, dry weather will be of the utmost importance. The arrival of a bale of new Cotton at New-Orleans on 3d inst., and subsequently in New-York, on the 14th inst., goes to corroborate what has been said of the forwardness of the crop. This is 12 days in advance of the earliest previous year (1856,) and more than 3 weeks in advance o last year. As usual, this "first bale" comes from Texas; it has been classed as Middling Fair; light staple and well-ginned; it has been reported sold @15c. per lb., and was forwarded in the steamship *Persia*, for Liverpool, July 18th. It is by some parties regarded as indicating the result of the severe drouth complained of there, which has been to force the Cotton to rapid maturity at the expense of the quantity grown. Whether it is a fair criterion of the very advanced state of the crop generally, remains to be seen; and on this will depend the quantity of new Cotton to be received by 1st September...... Wool has been in moderate demand here at well supported prices......Rice has been more sought after at higher rates......Hay is in light supply and fair request......The movements in other descriptions of Produce have been restricted.

CURRENT WHOLESALE PRICES.

	June 18.	July 19.
FLOUR—Superf to Extra State	$5 00 @ 5 40	$5 20 @ 5 60
Superfine Western	5 00 @ 5 10	5 15 @ 5 25
Extra Western	5 15 @ 7 30	5 35 @ 7 50
Fancy to Extra Genesee	5 40 @ 7 50	5 60 @ 7 50
Super. to Extra Southern	5 60 @ 7 50	5 50 @ 7 50
RYE FLOUR—Fine and Super.	3 40 @ 4 20	3 45 @ 4 25
CORN MEAL	3 40 @ 3 85	3 45 @ 3 75
WHEAT—Canada White	1 40 @ 1 50	1 42 @ 1 52
Western White	1 40 @ 1 52½	1 42 @ 1 56
Southern White	1 42½@ 1 55	1 42½@ 1 55
All kinds of Red	1 19 @ 1 35	1 25 @ 1 40
CORN—Yellow	67 @ 71	65 @ 68
White	70 @ 78	65 @ 75
Mixed	62 @ 64	61 @ 62
OATS—Western	37 @ 41½	38 @ 40
State	41½@ 42½	40 @ 41
Southern	37 @ 40	36 @ 39
RYE	85 @ 87	80 @ 82
BARLEY	60 @ 70	60 @ 72
White Beans	90 @ 1 00	95 @ 1 05
HAY, in bales, per 100 lbs	75 @ 1 00	87½@ 95
COTTON—Middlings, per lb	11 @ 11⅜	10½@ 10¾
RICE, per 100 lbs	3 75 @ 4 75	4 00 @ 5 00
HOPS, crop of 1859 per lb	6 @ 12	6 @ 13
PORK—New Mess, per bbl	18 25 @	18 37 @
Prime, old, per bbl	13 62½@13 75	14 25 @14 37
BEEF—Repacked Mess	8 75 @10 25	8 50 @10 50
Country mess	4 75 @ 5 75	4 50 @ 5 75
HOGS, Dressed corn, per lb	7⅛@ 7⅜	
Lard, in bbls. per lb	11⅜@ 11¾	13 @ 13⅜
BUTTER—Western, per lb	9 @ 16	10 @ 15
State, per lb	12 @ 19	10 @ 18
CHEESE, per lb	7 @ 11	7 @ 11
EGGS—Fresh, per dozen	12½@ 13½	14 @ 15½
POULTRY—Fowls, per lb	12 @ 14	12 @ 14½
Geese, per pair		1 25 @ 1 50
Ducks, per lb	15 @ 18	15 @ 17
Turkeys, per lb	12 @ 14	12 @ 14
Wild Pigeons, per doz	75 @ 87	1 25 @ 1 50
FEATHERS, Live Geese per lb.	44 @ 54	44 @ 55
SEED—Clover, per lb	8 @ 9	None selling.
Timothy, per bushel	4 37 @ 4 50	do.
SUGAR, Brown, per lb	6¼@ 8¼	6¼@ 8½
MOLASSES, New-Orleans, pr gl	47 @ 50	45 @ 48
COFFEE, Rio, per lb	13 @ 14¼	13¾@ 15
TOBACCO—Kentucky, &c. pr lb	3 @ 13	3 @ 12
Seed Leaf, per lb	5½@ 25	4 @ 25
WOOL—Domestic fleece, per lb.	32½@ 57½	32 @ 58
Domestic, pulled, per lb	27½@ 47½	28 @ 47
HEMP—Undr'd Amer'n pr ton.	125 @150	130 @150
Dressed American, per ton	160 @200	160 @200
TALLOW, per lb	9¾@	
OIL CAKE, per ton	29 50 @36 00	30 00 @36 00
APPLES, New, per bushel		2 00 @ 3 75
PEACHES, South'n, per bush'l.		3 50 @ 6 00
HUCKLEBERRIES, per bushel		3 00 @ 4 00
BLACKBERRIES, per bushel		3 00 @ 4 00
WATERMELONS, per 100		12 00 @18 00
Dried Apples, Per lb.	4½@ 6	4½@ 5¾
Dried Peaches—pr lb. South'n	6 @ 14	6 @ 14
Dried Cherries, pitted, per lb.	20 @	20 @
POTATOES—N. Mercers, p.bbl.		2 50 @ 3 09
New—Junes, per bbl		1 75 @
New Dyckman, per bbl		1 87 @ 2 00
ONIONS, New Red, per bbl	5 50 @	2 00 @ 2 50
TURNIPS, New, p. 100 bunch	3 00 @	2 50 @
CABBAGES, per 100	5 00 @ 6 00	3 00 @ 6 50
CUCUMBERS, p. bbl		75 @ 1 00
SQUASHES, per bbl	2 00 @ 2 25	2 00 @ 2 50
GREEN PEAS, per bbl	2 00 @ 2 50	1 50 @ 2 00
GREEN CORN, per 100		75 @ 1 00
BEETS, per 100 bunches		2 50 @
TOMATOES, per bushel		1 00 @ 2 00

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats*
26 bus ds *this* mon	268.940	1,519.803	1,030,625	30,523	25,632	391,267
26 bus. ds. *last* mon.	354,978	874,505	2,079,922	26,558	25.288	481,891

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
26 business days *this* mon.	459,460	2,050,100	1,199,000	39,600	35,000
26 business days *last* mon.	410,210	1,412,100	2,281,500	38,600	10,290

Breadstuffs exported from N. Y., from Jan. 1 to July 18.

	1859.	1860.
Wheat Flour, bbls.	328,790	631,504
Wheat, bush	21,907	2,200,456
Corn, bush	116,701	1,605,993

The receipts at tide-water of the principal kinds of Breadstuffs, from the opening of the Canals to and including the 14th inst., have been as follows:

	1860.	1859.	1858.
Canal open—	April 25.	April 15.	April 28.
Flour, bbls.	295,600	166,700	609,500
Wheat, bush	2,912,700	486,400	3,803,900
Corn, bush	5,069,600	971,500	1,209,600
Barley, bush	78,700	140,700	368,600
Rye, bush	91,500	93,200	169,600
Oats, bush	2,926,900	1,866,800	1,441,100

A car load of new Spring Wheat was received at Chicago on Saturday, July 14, from Sterling, being the first of the season. The quality was fair, but it was damp, and on that account it was rejected. This is eleven days earlier than the first arrival of the crop of 1859, and about one month earlier than the crop of 1858. The dates on which the first receipts of Spring Wheat at Chicago took place for a series of years are as follows:

1860	July 14	1857	August 5
1859	July 25	1856	August 8
1858	August 12		

N. Y. Live Stock Markets.—THE CATTLE MARKETS.—Receipts for past five weeks; 20,299, averaging 4,060 per week—a pretty good supply for the season. Prices were even lower than reported last month, until the present week, when with 3 951 bullocks on sale, an advance of fully ½c. obtained. Selling rates July 18th: First quality 9¾c.@10½c. per lb. estimated dressed weight: Medium quality 9c.@9½c.: Poor 8c.@8½. Average for all the cattle sold, 9c. This market closed heavily, however, the last sales being made at lower rates than the above.

VEAL CALVES.—Receipts are declining as the season advances. Total city receipts for five weeks past, 5,277, or 1,055 per week. Prices are gradually advancing. The best veals now sell at 6c. per lb live weight: Fair calves 5c.@5½c., and poor ones 4c.@4½c.

SHEEP AND LAMBS.—Receipts for the five weeks just ended, were 56,707, or 11,341 per week. Prices have been kept up to last month's figures, viz.; 4½c.@5c. per lb, live weight for good to prime sheep, and 7c.@8c. for lambs.

HOGS.—Receipts for five weeks ending July 19th, 18,382. They have been sold at gradually improving rates, the last sales being at 6½c.@6¾c. per lb. for corn hogs, and 6c.@6¼c. for still hogs, with a pretty brisk demand.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) *r* indicates rain.]

JUNE.

1......60	7......62*r*	13......60	19......62*r*	25.....59
2...... 60	8......62*r*	14......62	20 .....60*r*	26.....64
3......61	9......56	15......62	21......55	27.....72
4......62*r*	10......56	16......63	22......55	28.....66
5......61*r*	11......55	17......64	23......59	29.....72*r*
6......60	12......58	18......62	24......60	30 . ..72

JULY.

1......68*r*	5......66*r*	8......60	11......68	14.....60
2......64	6......56	9......67*r*	12......60	15.....65
3......66	7...... 58	10...... 69	13......60*r*	16.....70
4......70*r*				

The Weather since our last report, (June 18,) has generally been warm, and rather dry in many localities. There have been several showers, but generally not wetting the soil deeply. The continued dry weather was very favorable for securing hay and grain in good condition—we have seldom seen these crops harvested and cured in better order.——OUR DAILY NOTES, condensed, read thus:—*June* 19, heavy thunder showers during day and night, doing much good—20, showery—21, cool and cloudy—22, to 28 clear and hot, ground getting quite dry, but sprinkled by light shower on evening of 28th—29, 30, 31, clear and hot, but rain needed.——*July* 1, cloudy A. M., clear P. M.—2, clear and warm—3, clear A. M., cloudy P. M., with fine shower at night, which was much needed—4, clear A. M. showers P. M., and at night—5, light rain—6, 7, clear and fine—8, cloudy light showers at night—9, shower A. M., clear P. M.—10, 11, 12, clear and warm—13, clear A. M., fine local showers P. M.—14, 15, clear and hot—16, clear and hot, light shower at night—17, 18, clear and warm—19, light shower A. M., clear and hot P. M.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion):

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Teacher's Situation Wanted at the South.

A young man who has just graduated from a N. E. COLLEGE, desires to engage in teaching at the South. Abundant references as to scholarship, character, etc. Refers by permission to the editor of the *American Agriculturist*, to whose care any letters may be addressed, for J. W. D.

THE YOUNG FARMER'S MANUAL AND FARMER'S WORKSHOP, with 200 original illustrations, is one of the best books ever published for the use of farmers. It describes all the operations of the farm, and how to make, use, and keep in order all kinds of household and farm tools.

Catalogues of all kinds of Agricultural Books sent free to any address.

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Publishers of the HORTICULTURIST,
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CARBON OIL.—Carbon Oil is made from the NATURAL OIL WELLS of Pennsylvania, and excels Coal Oil in its freedom from smoke and the brilliancy of its light. It burns in any of the coal oil lamps, and is for sale at the CARBON OIL COMPANY'S DEPOT, 191 PEARL-ST., New-York.

The New Wringing Machine.

For sale by DAVID LYMAN, Middlefield, Ct.
LE ROY & CO., Hartford, Ct.,
and by our Agents of the Metropolitan Washing Machine, and
WM. FAULKNER & SON., San Francisco, Cal.

NOT TO BE OVERLOOKED. EMIGRATION is rapidly tending towards the State of Michigan, not only on account of the offer of a free Homestead of 40 acres of valuable farming land to any actual settler, but also because of the offer of any quantity of State land at $1.25 per acre, with a term of ten years for payment. Further information given by RUDOLPH DIEPENBECK,
State Commiss. of Emigt. of Michigan, 83 Greenwich-st., N. Y.

TREES! TREES! TREES!

For the Autumn of 1860.

The Subscribers, grateful for past favors, and encouraged with a larger and better assortment than ever, ask the attention of Nurserymen, Dealers, and Planters, to their immense stock of well grown trees and plants, comprising

APPLE TREES—Standard and dwarf, strong and healthy, with "King of Tompkins Co." and other good sorts in large supply.

PEAR TREES—Dwarf, a splendid stock, one, two, and three years; fine, strong and healthy trees, of the most approved sorts, on the quince.

PEAR TREES—Standard, a large and fine assortment of the most desirable kinds.

CHERRY TREES—Standard and dwarf, one, two, and three years, a large stock and beautiful trees Early Richmond by the 100 or 1000.

PEACH TREES—One year; Plum, two years; Orange Quince, Apricots, and Nectarines.

CURRANTS—Red and White Dutch, Victoria, Cherry, and White Grape, with other sorts.

GOOSEBERRIES—Hougton seedling and best English varieties.

RASPBERRIES—Large quantities of such kinds as Orange, Belle de Fontenay, Franconia, Antwerps, &c.

BLACKBERRIES—Lawton, largely; Dorchester and Newman's Thornless.

RHUBARB—Myatt's Linnæus, Cahoon's Mammoth, and Downing's Colossal.

GRAPE VINES—Delaware, Diana, Concord, Hartford Prolific, Rebecca, Logan, and many other new and old sorts, in large quantities, large plants, one and two years old, grown in the open air, and in large pots under glass—also

FOREIGN VARIETIES

for cultivating under glass, of the best kinds, such as Stockwood Golden Hamburgh, Bowood, Muscat, Muscat St. Laurent, Black Hamburgh, Zinfindel, Royal Muscadine, and 30 others of the best varieties, one and two years old; for

ORCHARD-HOUSE CULTURE

We have a fine lot of these in extra large pots, for *immediate fruiting*.

EVERGREENS—Norway Spruce, Balsam Fir; Scotch, Norway, Austrian and White Pines; Red Cedar, American and Siberian Arbor Vitæ, Junipers, &c.

DECIDUOUS TREES AND SHRUBS—Horse Chestnut, Mountain Ash, European and American Linden, Maples, American Chestnut, American and European Ash, Judas Tree, Laburnum, Snow Ball, Purple Fringe, Altheas, Spireas, &c.

ROSES—Climbing and Hybrid Perpetuals, a fine assortment of strong plants.

HEDGE PLANTS—American Arbor Vitæ, Red Cedar, Privet, Honey Locust, &c.

STOCKS FOR NURSERYMEN—Angers Quince, Pear, Plum, Mazzard and Mahaleb Cherry, one year, and Apple Stocks, two years.

Packing will be done in the best manner for all parts of the country.

Descriptive Catalogues furnished—Wholesale Catalogue in August. T. C. MAXWELL & BROTHERS,
Geneva, Ontario Co., N. Y., July 20, 1860.

FARM AND RESIDENCE AT MADISON, Morris Co., New-Jersey. The subscriber offers for sale his residence, consisting of 164 acres of land, with fine improvements, including a Spacious Mansion House, Grapery, Fruit of all kinds, commodious Barns and Farm Buildings, Tenant Houses &c. Morris County is celebrated for the favorable effect of its climate upon Consumptives or those troubled with bronchial affections. This property is an attractive one to a Gentleman of means. For particulars address the owner

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Madison is distant 1 hour 20 minutes from New-York City by Morris and Essex Rail Road.

THOROUGH BRED NORTH DEVON AND AYRSHIRE CATTLE. In consequence of above I offer for sale in lots to suit purchasers, my entire stock of Thorough Bred Cattle at reduced prices. For particulars address as above.

Farm For Sale. Great Inducements. A Farm of 82 acres in New-Jersey, convenient to Newark and New-York Markets by Rail Road, the land is excellent, well watered, and in good condition—with Farm House, Barns, Fruit Trees, &c.—the location is pleasant and healthy. The stock and farming utensils will be sold with it.

This is a rare opportunity for a man with large or small capital—as credit will be given, if desired, for nearly the whole amount of purchase money to a man who wishes to work out the cost—possession given now or later: for particulars address
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A NEW WEEKLY PAPER.

On Saturday, 14th of July,

was issued in this city the First Number of

THE METHODIST,

A WEEKLY PAPER, OF EIGHT PAGES.

IT will aim to be the exponent of Conservative principles, and will be thoroughly loyal to the Methodist Episcopal Church

While it will discuss with frankness and courage every subject of Interest to the Church, it will avoid personal or direct controversy with existing Methodist Journals.

Upon the subject of Slavery, THE METHODIST will represent the views expressed by the Bishops in their late address to the General Conference. They are views of the aplication of Christianity to Slavery, which are believed to be sanctioned by Apostolic teaching and practice. It will resist all attempts, as the next General Conference approaches, to replunge the Church into controversy, or to make further encroachments upon the provisions of the Discipline in relation to Slavery.

Inasmuch as the subject of Lay Representation has been formally presented by the General Conference to the people for consideration, THE METHODIST will treat it as a question of moment to the denomination, and will open its columns for its temperate and loyal discussion.

It will represent no party, association, or clique. Its ample capital has been provided, apart from such combinations, by those who believe that the time has come for a larger, more thoroughly edited, and more independent organ of Methodism than its established Journals, with their superabundant official documents and other formal but uninteresting matter can possible be.

In fine, THE METHODIST will be an attempt, sustained by abundant means from the people themselves, to supply their families with an organ which shall compare with the largest and best journals of other denominations; which shall command the best literary ability of the Church at home and abroad; which shall represent fully and loyally and courageously its denominational interests as well as the interests of general Christianity; which shall be conducted with prudence and dignity, and be above partisanship and virulence; and which shall be a representative of the great religious interests of the age—a complete family paper, and a decided organ of the Church. It will be edited by the

Rev. G. R. CROOKS, D.D.,
and the Rev. JOHN McCLINTOCK, D.D.,

the latter Corresponding Editor, and at present residing in Paris. The Editors will be assisted by an efficient corps of contributers, whose names will be hereafter anounced.

A thorough, classified outline of the news from the leading Christian denominations, and of foreign religious intelligence, will be prepared by Prof. *A. J. Schem, author of the Ecclesiastical Year Book.* It will present also a Weekly Review of the Methodist press and of the New York city religious press. It will have a Weekly Summary of Missionary News. All the usual departments of general Intelligence, the Money Market, the Prices Current, Agriculture, Scientific, Literary, and Art Items, etc., etc., will be provided. Careful attention will also be given to the Youth's Department, which will be under the care of a special Editor. Its criticisms of new publications will be prepared with discrimination, so that they may always be safely relied upon.

Terms:—Two dollars a year; five copies, to one address, $9; twelve copies, to one address, $20; twenty copies, to one address, $30. Subscriptions received for six months at the same rates. Payments invariably in advance.

Office, Nassau Bank Building, No. 7 Beekman St.,
New-York.
L. BANGS, Publisher.

COURT OF DEATH.

The subscriber has issued a large and very beautiful CHROMO LITHOGRAPHIC ENGRAVING of Rembrandt Peale's celebrated painting of the Court of Death. This painting has long been valued at

25,000 DOLLARS,

and is one of the most impressive and beautiful moral lessons ever put upon canvas. The Engraving is a Fac simile Copy of the original, 23 by 31 inches in size, printed in oil colors

The original painting (and engraving) contains 23 figures, representing Death (as a Judge in shadowy obscurity) with his various Agents around him. War, Famine, Pestilence, Conflagration, Slain Soldier, Widow and Orphan, Sensual Pleasure, Intemperance, Remorse, Delirium, Suicide, and the Aged Saint, sustained by Christian Faith. While the lessons inculcated by the picture are impressive, they are attractive and pleasing—such a picture as every family desires as a parlor ornament.

The regular price for such or similar engravings, in this city, is $5—and at this price only about 5,000 copies can be sold—but the subscriber has undertaken to sell 100,000 copies of the Court of Death at $1 per copy! By thus increasing the number, the price is reduced.

No Engraving has received more hearty and unqualified praise than this; from Clergymen, Connoisseurs in Art, &c. That it is a correct copy of the original painting, the following testimonial from Mr. Peale will show.

Philadelphia, Nov. 16, 1859

I have seen the Chromo-Lithographic Engraving of my Painting of the Court of Death, recently executed for Dr. G. Q. Colton, (the present proprietor,) by Sarony, Major & Knapp, of New-York, and can certify that it is an accurate and admirable copy of the original Painting.

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From the New-York Observer.

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Write Name, Town, County, and State plainly.

Address G Q. COLTON,
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FOR BOYS.

A NEW FEATURE IN SCHOOL INSTRUCTION.

A Family School limited to 20 pupils, and combining **Horticulture,** *practical* as well as *theoretical,* with **Mental Discipline** and **Moral Culture.**

Prof. Wm Hopkins, for a long time Principal of the Auburn Academy, N. Y., but for the past six years, Professor of Chemistry and Natural History in Genesee College, Lima, N. Y., will open a Boarding School for Boys, at Metuchen, N. J., Tuesday, Sept. 4th, 1860. The number will be limited to 20, and every effort will be made to render the School select in character and results. All the aims and adaptations will be to impart the highest—the most thorough, and comprehensive culture in every department of Education, pursued in the best schools in this country.

The domestic arrangements, also, will all be ordered with the view of constituting a happy family and a pleasant home.

The feature of Horticultural Education will, it is believed, commend itself to public favor. Special facilities for improvement in Horticultural knowledge, theoretical and practical, will be afforded, while at the same time the pursuit of it will not be allowed in any way to interfere with the regular scholastic studies of any who may not desire to engage in its prosecution. Prof. H. will have a few acres of ground devoted to the growth of fruits, in which he has had much practical experience, and for the favorable prosecution of which, his professional life in the past has peculiarly fitted him.

The location selected is most favorable to the enterprise. The village of Metuchen is situated directly on the New-Jersey Railroad, 27 miles from the City of New-York, and 60 from Philadelphia. The place is noted for health and pleasantness of location. The inhabitants are moral and intelligent. There are no haunts of public dissipation, and therefore parents need not fear in respect to temptations peculiar to large cities and villages.

The scholastic year will be divided into three terms of 13 weeks each. The first will commence Tuesday, Sept. 4th, 1860, and continue till November 24th. The beginning and closing of subsequent terms will be announced hereafter.

Terms of admission are $250 a year, one half of which must be paid in advance, and the balance at the close of the term or year.

Able and accomplished assistants will be employed in all the departments.

Frequent lectures and experiments in the various branches pursued, will be given by Prof. H. In addition, the Rev. Messrs. Thompson and Plumley, clergymen in the place, will give occasional lectures. The former will give a course during the first term, on Moral Philosophy.

Prof. Hopkins is permitted to make use of the following references:—The Faculty of Genesee College, Lima, N. Y.; Prof. C. Dewey, of the Rochester University, Rochester, N. Y.; D. D. T. Moore, Esq., of the Rural New-Yorker, Rochester, N. Y.; Dr. S. B. Woolworth, Secretary of the Regents of the University of the State of New-York, Albany, N. Y.; B. P. Johnson, Esq., Secretary of the N. Y. S. Ag. Society, Albany, N. Y.; Prof. Wm. F. Phelps, Principal of the State Normal School of New-Jersey, Trenton: H. Ivison, Esq., of the firm of Ivison and Phinney, New-York City; Dr. J. M. Howe, New-York City.

Metuchen, N. J., 1860. WM. HOPKINS.

☞ Circulars may be obtained of the President as above, or in New-York at the offices of the *American Agriculturist*, and Horticulturist, and at Ivison & Phinney's.

HAVE YOU A SON OR DAUGHTER TO EDUCATE—Send for the new Catalogue of the Fort Edward Institute, N. Y. Superb brick buildings; 18 teachers with the best facilities in every branch of Commercial, Classical or Ornamental study. $36 for 14 weeks. Term begins August 23d. Address Rev. JOSEPH E. KING,
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Granville, Ohio Female Academy.

THE 27th ACADEMIC YEAR

will commence on Thursday, the 13th of Sept. next. The highest educational advantages are afforded, both in the solid branches, and also in the ornamental ones, viz: Music, Painting, Drawing, and Languages. $144 will pay all expenses for one year for tuition and board, including washing lights, fuel, and furnished room.

Granville Female Academy. — This Institution which has been in operation 26 years, has become one of the best of our schools for the thorough and christian education of young ladies. Its location is healthy and moral, and the expense is much less than in Eastern Seminaries. It is, as it deserves, in a prosperous condition.—*Ohio Repository.*

For catalogues and further Information address
Granville, Ohio, July, 1860. W. P. KERR, A. M., Principal.

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It Tells You How to draw up Partnership Papers and gives general forms for Agreements of all kinds, Bills of Sale, Leases and Petitions.

It Tells You How to draw up Bonds and Mortgages, Affidavits, Powers of Attorney, Notes and Bills of Exchange, Receipts and Releases.

It Tells You The Laws for the Collection of Debts, with the Statutes of Limitation, and amount and kind of property Exempt from Execution in every State.

It Tells You How to make an Assignment properly, with forms for Composition with Creditors, and the Insolvent Laws of every State.

It Tells You The legal relation existing between Guardian and Ward, Master and Apprentice, and Landlord and Tenant.

It Tells You What constitutes Libel and Slander, and the Law as to Marriage Dower, the Wife's Right in Property, Divorce and Alimony.

It Tells You The Law for Mechanic's Liens in every State, and the Naturalization Laws of this country, and how to comply with the same.

It Tells You The Law Concerning Pensions, and how to obtain one, and the Pre-emption Laws to Public Lands.

It Tells You The Law for Patents, with mode of procedure in obtaining one, with Interferences, Assignments and Table of Fees.

It Tells You How to make your Will, and how to Administer on an Estate, with the Law and the requirements thereof in every State.

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A neat pamphlet of 32 pages, containing the condensed but plain directions of *Seventeen practical Onion Growers*, residing in different parts of the country; and embracing full directions for every item of labor from selecting seed and preparing ground, to harvesting and marketing crop. Nowhere else can so full, complete, and useful information on this subject be found. Sent post-paid, on receipt of 21 cents (or seven 3-cent stamps). Address
Publisher of American Agriculturist.

ITALIAN BEES.

A CARD.

I notice in the *American Agriculturist* for July the following alleged certificate:

"This may certify that I have examined the Italian Bees of Mr. Kennedy, which he procured of Mr. P. J. Mahan, and pronounce them pure and equal to any imported or owned by Mr S. B. Parsons.
(Signed,) A. BODMER, New-York, June 4, 1860."

I have only to say that I have given no such certificate, or any certificate whatever to any person whatever. I have given my address to several persons. If anything has been written over that address, I am not accountable for it.

A. BODMER, Beekeeper to Mr. Parsons.

Witness, T. R. Trumpey.

P. S. I have heard it rumored that Mr. Kennedy threatens to publish an affidavit that I did sign the above certificate. An affidavit may be as easily made as a certificate. Mr. Kennedy was at Flushing a few days before the date of the certificate, and asked me when I would be in New-York. I told him I must see a friend in Brooklyn on the following Sunday.——The date of the certificate is adroitly made to conform to this information. My friend, the German Pastor, knows that I was with him all that day, except when on the road. I am a foreigner, and do not understand how such statements can be believed respecting me. A. BODMER.

Witness, E. A. Brackett.

ITALIAN BEES.

STATE OF NEW-YORK.
City and County of New-York. } ss

Samuel L. Kennedy, of the City of Brooklyn being duly sworn, deposes and says, that some time in the month of June last he heard A. Bodmer say, that the Bees which P. J. Mahan sold L. W. Kennedy where as good as any Mr. Parsons had. Deponent further says, that said Bodmer at the same time gave to said Kennedy a certificate, signed by himself, to that effect. Deponent further says, that before signing said certificate, the contents were fully explained and understood by said Bodmer: and deponent further says, he has no interest whatever in said Bees.

[Signed] S. L. KENNEDY.

Sworn before me this 5th day of July.
ABR'M. W. KENNEDY, Commissioner of Deeds.

The interested efforts to injure my business must fail—see the Country Gentleman of the present week. P. J. MAHAN.
No. 720 Chestnut st., Philadelphia, Pa.

THE GREAT AUSTIN SHAKER
SEEDLING STRAWBERRY.
THE LARGEST STRAWBERRY IN THE WORLD.

Amateurs consider this Seedling the greatest acquisition to our small fruits ever introduced. A monster in size, wonderfully prolific, and of the finest flavor. For particulars see *Agriculturist* for May. We are now prepared to take orders to commence delivering plants in August, in rotation as ordered, at $4 00 per doz., or $25.00 per hundred.

Address either
CHAUNCEY MILLER, Albany, N Y., Shaker Trustee; or,
WM. S CARPENTER, 468 Pearl-st., New-York.

☞ We the undersigned having ordered largely of the plants of the Austin Seedling Strawberry, subject to a countermand, if not satisfied when seeing the fruit and plants in bearing, were induced to visit Watervliet, where it originated, and see for ourselves the true condition of this variety. We found it growing in the most common way, in masses, and not in hills, without any particular care, and much injured by the drought, yet the great productiveness, and uniform large size, and fine flavor induces us, to consider the Austin as one of the best varieties in cultivation, and a great acquisition to our small fruits. We found the Austin averaging considerably larger than the Wilson, and about as productive, and from appearances will continue to fruit into July.

JOHN C. THOMPSON, Tompkinsville, Staten Isla d, N. .
JAS. L. LOCKWOOD, Stamford, Ct.
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New and fine Varieties of Strawberries.

The subseriber will now take orders for the following new varieties:

AUSTIN. $4 per doz , or $25 per hundred.
ATHLETE, a superb seedling from Easton, Pa., very large and fine, per doz. $1.
EXCELSIOR or DEPTFORD, white, a new seedling, the best white known, as large as the Wilson's Albany, and fine flavored, perfectly hardy, per doz. $1.
DELICE D'AUTOMNE, a new variety, very large and la e,
BOYDEN'S MAMMOTH, per doz. 1 00.
fine, $1 per doz.
VORIS QUEEN, originated at New Rochelle, considered there one of the finest of all the strawberries, vary large, fine, and productive, per doz $1.
STATEN ISLANDER, a new seedling of great promise, very large, prolific, and of the finest flavor. per doz. $1.
Also WILSON'S ALBANY, at $1 per hundred, or $8 per thousand.

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The Subscriber, having thoroughly tested this new strawberry for some three years past by the side of the most esteemed known varieties, can confidently recommend it as one of the best, either for the garden or market It is a large variety, flowers perfect, nearly as productive as the Wilson, but EVERY WAY SUPERIOR TO IT in quality. Its firmness and fine crimson color will give it a high place as a market fruit, and it is believed that the Bartlett Strawberry will be found among strawberries, what the Bartlett Pear is among pears, AN INDISPENSABLE VARIETY FOR GENERAL CULTIVATION

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Strawberries! Strawberries!!

" By their fruits ye shall know them "

What Strawberry shall I plant? Why! the Wilson's Albany —Why? Because it is the most productive, the largest, and finest berry out. In fact it is the " fashionable " berry.

Originated at the Albany Nursery, where plants can be procured by addressing JOHN WILSON, Albany, N. Y.

Price per 100 plants	$1
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Liberal discount to the trade.

Wilson's Albany Seedling.
Hooker's Seedling!!

Strong, selected new plants of these desirable varieties, warranted true to name, carefully packed so as to insure safe transportation for any distance at $7 for 1000; $4 for 500, or $1 for 100, for sale by WM. RICHARDSON,
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Raspberry and Blackberry Canes—all the desirable varieties for sale.

THE SUBSCRIBER OFFERS FOR sale the following varieties of strawberries, which he warrants pure and genuine.

Wilson's Albany, Hooker, Searlet Magnate, Peabody, at $1 per hundred.

Jenny Lind, Boston Pine, Brighton Pine, Ladies Pine, Delice d'Autonne, Vicomptesse Herricart de Tbeury, Boyden's Mammoth, and many other popular varieties, at 50 cts. per doz.

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West Macedon, Wayne Co., N Y.

FARM PRODUCE
Sold on Commission,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.

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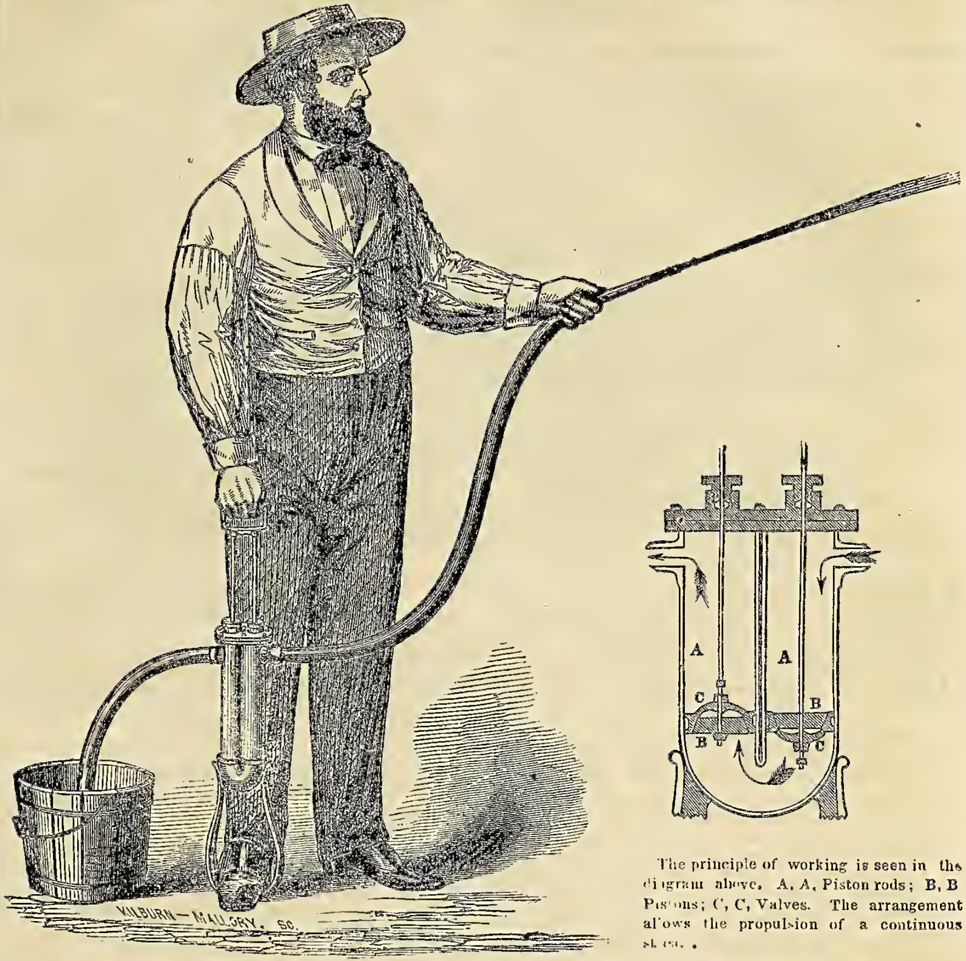
Refers to the Editor American Agriculturist.
" E. R. Cooper, Cashier Market Bank, New-York

THE HYDROPULT,



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It is a most desirable instrument for use in

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It can be used for all purposes or which a hydrant, or force pump is applicable, and in situations where other contrivances are useless.

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We have also been present at fires where its utility as a portable Fire Engine has been fully tested and proved beyond a doubt. In one particular instance we have seen a large barn saved from destruction, when in imminent danger from the flames of a burning building within six feet of it, and which was totally destroyed. There was not water enough to be had to supply an ordinary fire engine. Yours respectfully

JOSEPH BRECK & SON,
51 and 52 North Market-st., Boston.

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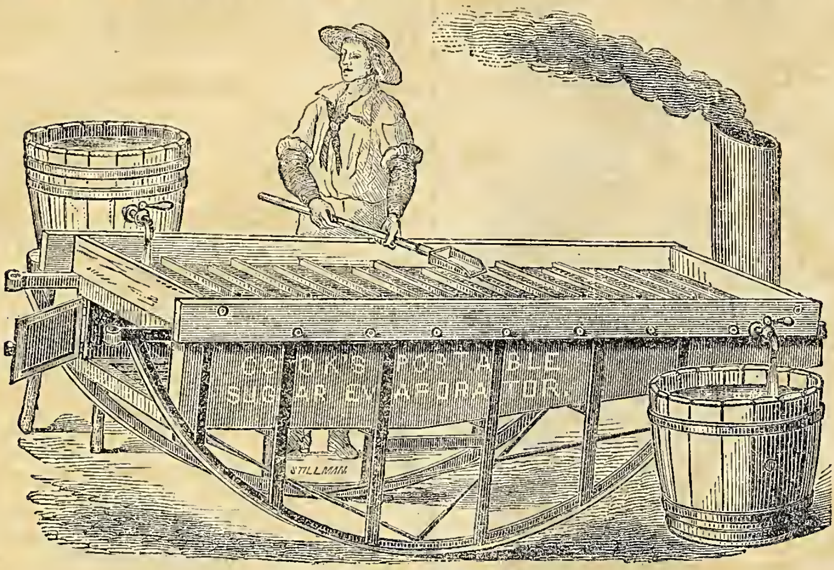

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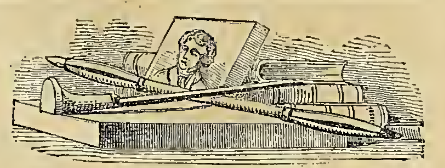

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Failure of Seeds—The New Rochelle Blackberry Seed.

A large number of seeds of various kinds have been forwarded to us from different parts of the country. With few exceptions these have all been carefully planted; but we are sorry to report that very many of them have failed to vegetate. The excessive drouth has had much to do with this failure. Many of our own seeds, which were proved to be perfectly good by previously starting them in pots, have entirely failed when planted out in the usual manner. Indeed, we have lost more seeds, plants, and trees, the present summer, than in all our past experience; and we are now obliged to use hundreds of buckets of water every week to keep our trees and plants alive even, to say nothing of losing the usual new growth of the season.

The New Rochelle Blackberry Seed sent out by us last Spring to a large number of persons all over the country, we are sorry to learn has, in some instances, failed to vegetate thus far. This has probably resulted from the dry season, or from allowing the seeds to become too dry before planting. As the seeds were without doubt sent in good order, having been secured with special care, the probability is that some of them may lie over in the ground until next Spring, as is frequently the case with wild seeds. However, to make assurance doubly sure, we will gather a lot of fresh seed as soon as the berries are ripe this season, and forward a parcel to those whose seed has not yet vegetated—if a ready directed envelope be provided for enclosing the new seed. The new seed can be planted as soon as it arrives, covering it with not over half an inch of fine earth. When thus planted fresh, it can hardly fail to start this Fall, or in Spring at the latest.

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Strawberry Markets.—Cincinnati, which has been considered the largest hog and strawberry market in the world, will have to look to her laurels, or San Francisco will bear the palm in the strawberry line, at least. Only think of a strawberry patch of 80 acres, from which the proprietors sent in from 2000 to 4000 pounds of berries, daily, during the strawberry season, according to a statement in the *California Farmer*.

Novel Strawberry Protector.—An Eastern exchange mentions an ingenious method by which a gentleman saved his strawberries from the daily attacks of an army of robins. He killed a worthless cat, skinned and stuffed her, and having fitted in glaring glass eyes, he mounted her in the center of his strawberry patch. Although the robins continued to congregate upon the fence and trees near by, and scolded incessantly, none of them ventured upon the patch again. Perhaps the same *scare-robin* would save the cherries. It is worth a trial, particularly where cats abound as they do on some premises at night.

Agricultural Reading Room.—The Chester Co., (Pa) Agricultural Society have fitted up in good style, an Agricultural Reading Room for the use of their members. The advantages of this arrangement are obvious. Although every cultivator should have a select library, many valuable works are beyond the means, or are inaccessible to private individuals, who would cheerfully contribute for the privilege of consulting such books from time to time as they might need. Such a room becomes a center point for the diffusion of information, and head quarters for local agricultural meetings, discussions, and interchange of opinions. The example is a good one, and will, we trust, be generally followed.

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Price of the New "Wringer"—Correction.

In the description of this new implement, on page 247, (which was written without the knowledge of the manufacturer,) the retail price is stated at $8 in a part of the present edition. This we learn is wrong; and to avoid difficulty, we make the correction here, as the inside sheet is partly printed. The price is $10. We were led into the error by noticing that when sold with the $10 washing machine, the two are put at $18.

◆

Notes on Postage.

No Postmaster has any legal right to charge over SIX CENTS a year postage on the *American Agriculturist.* The paper is manufactured expressly with reference to having each number weigh a trifle less than *three ounces*, when weighed dry and without the wrapper, as the law directs; and the law is explicit that periodicals weighing not over three ounces, shall be charged one cent each, if sent singly, and only *half* this rate when the postage is paid quarterly in advance at the office where received.

Postage Stamps are convenient for remitting small sums; they should always have a piece of paper between the gummed sides, when mailed, to prevent their adhering together. *Ten cent* stamps are not so easily sold as 3-cent stamps, but can be disposed of in time. The 3-cent stamps are most desirable.

Standing Premiums.

[The following premiums are still offered, as well as those named in the previous numbers.]

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8¼ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines,** new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by over two years' use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

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Premium XXVIII.—Having proved the accuracy and convenience of Kendall's new and improved *Portable* or *Aneroid Barometer,* we offer one of these instruments as a premium to any person collecting and sending in 66 subscribers to the *American Agriculturist,* at the lowest club price, 80 cents each, or 33 subscribers at $1 each. See description on pages 232 and 233 of this paper. Price $10.

◆

Missing Numbers Supplied.

Any copy of the *Agriculturist*, failing to reach a subscriber through carelessness of the mails, will be cheerfully replaced without charge. Copies received, and afterwards lost or spoiled, will be supplied at the regular rates.

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ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE.
SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 9. NEW-YORK, SEPTEMBER, 1860. [NEW SERIES—No. 164.

☞ **Office at 189 Water-st.,** (Near Fulton-st.)
☞ **Contents, Terms, &c., on pages 284-88.**

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September.

"Autumn paints
Ansonian hills with grapes, whilst English plains
Blush with pomaceous harvests, breathing sweets.
O let me now when the kind early dew
Unlocks the embosomed odors, walk among
The well ranged files of trees, whose full-aged stores
Diffuse ambrosial steams, than myrrh or nard
More grateful, or perfuming flowery bean!
Soft whispering airs, and the lark's matin song
Then woo to musing, and becalm the mind
Perplexed with irksome thoughts. Thrice happy time,
Best portion of the various year, in which
Nature rejoiceth, smiling on her works,
Lovely to full perfection wrought!"—PHILIPS.

The capacities of our soil and climate for fruit growing have been greatly under-estimated. They are by no means now fully tested, and our best pomologists hardly comprehend the whole truth in this regard. It is not until within the last twenty years that horticulture has received any scientific and systematic attention in this country. There were individual fruit growers, gentlemen of intelligence and wealth in our cities or their suburbs, who had the leisure to plant gardens and orchards, and to study the wants of trees and shrubs bearing fruit. But these pioneers labored under very great disadvantages from the fact that there were no horticultural publications and no associated effort to promote the science and practice of horticulture. The extent to which new fruits may be originated by hybridizing and by planting seeds, was not well understood. Only a very few were enabled to avail themselves of the labors of European pomologists, and the introduction of a new ornamental tree or shrub, or a new fruit, was of rare occurrence. There were very few intelligent nurserymen, and if a new fruit was procured from abroad, or originated at home, it was a very long while before it became generally known. Every one pursued his investigations almost wholly alone, and the knowledge he attained, often perished with him, or was confined to his immediate neighborhood.

The disabilities under which fruit growers labored, are sufficiently shown by the fact, that the Pinneo pear, one of the finest fruits of its season, was grown in eastern Connecticut for a century before it was brought out by an Eastern nurseryman, and baptized with a new name, when it received a premium from the Mass. Horticultural Society as a *new seedling!* Even now, with all the researches of Pomologists and the multiplication of societies extending over twenty years, we are continually finding fruits of great merit, little known except in the limited districts where they originated. Go into almost any of the towns in New-England, and you shall find good seedling apples that have been known in the vicinity for several generations, and yet are not found in the books. If an apple like the Baldwin, the Roxbury Russet, or the Rhode Island Greening happened to spring up on the farm of a gentleman interested in fruit growing, it was disseminated. If it originated upon the farm of a man whose ambition ran solely to corn, oats, potatoes, and grass, it would never be multiplied, even upon his own farm. We find farmers by the hundred, even in New England, who never attempted to graft or bud any kind of fruit. If they have any fruit upon their farms, it is on chance trees that have sprung up by the walls or in the edges of woods and bush pastures, and have escaped the innumerable croppings of animals. There are many more whose only fruit trees are the recently planted products of the nursery.

It is even more recently that the vine has received any attention. People are still found by the thousand who have never tasted any thing better than a wild grape, and whose ideal of a good grape is an article of strong foxy odor, of the size of bullets, pulp tough as rubber and half seeds at that, with six berries to the bunch. They honestly believe that these are better than the cultivated varieties, and adorn their walls with wild seedlings from the swamp. In no department of pomology have we made more satisfactory progress than in grape growing during the last ten years. A dozen or more new varieties of great promise have been introduced, and some of them quite generally distributed. Where the ideal of high culture has been to plant a vine in common garden soil and let it take care of itself, there have of course been failures, and a very poor opinion formed of the capacities of our soil and climate for vineyards. But where a suitable border has been prepared, well drained, and made rich in bones and compost, and the vines laid down in Winter and well trained in Summer, the most satisfactory results have been obtained. In the back yards of city and village dwellings, where the vine has the advantage of protection from winds and frost and an abundant supply of soap suds, the Isabella and Catawba, though later than the newer varieties, have generally done well.

The proper training of the vine and the making and treatment of the border, are not yet perfectly understood. The methods of our most successful amateurs, if published, are not distributed very widely among the people, and are probably thought to be too laborious and expensive to be generally adopted. But the results reached at Croton Point, at Iona Island, and other places where the trial has been thorough, fully justify the opinion that good table and wine grapes may be grown economically in all parts of the country south of Albany, and perhaps still further north, in favored localities.

Every Autumn, with its multitude of fairs in almost every county and city, brings very satisfactory evidence of the healthful progress of horticulture. Fruits rare ten years ago are now widely distributed, and make their appearance upon the Fair tables from Maine to Georgia. While the varieties that flourish equally well in all parts of the country are exceedingly limited, every section has its native fruits that leave little to be desired. Even the South, which entered later than the North upon horticultural improvement, has a large list of native apples of surpassing excellence. The display of fruits from North Carolina at the meeting of the American Pomological Society in this city two years since, was a marked feature in the exhibition. The great West teems with its new apples, pears, grapes, plums, and cherries, and the vineyards along the Ohio are every year spreading over a larger territory.

On the whole, as we look forward to the biennial session of our National Pomological Society the present month, we improve the occasion to congratulate our readers upon the healthful progress of fruit culture in all parts of the land. Good fruit adapted to his soil and climate, is now within reach of every intelligent land holder in the country. At a trifling expense he can learn the best varieties for his location, and how to plant and tend them so as to make success certain. Almost a complete treatise upon fruit culture could be made from any one of our own annual volumes. They gather up the ripe experience of amateurs, and convey information only learned by years of trial and multiplied losses.

Calendar of Operations for Sept., 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45° ; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the North, and later for the South.

Explanations.—*f* indicates the *first* ; *m* the *middle* ; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated ; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

September is, in many respects, one of the most important months in the farming year. The great staples, wheat, rye, oats and grass are secured, and corn is often sufficiently advanced to enable us to fairly estimate the yield. It can, in most instances, be pretty accurately decided whether the year has been a profitable one for the community and for individuals. Taking the country together, we hear but one opinion expressed—it is a year of plenty. But all have not shared the full measure of the bountiful yield. No favoring sunshine nor timely showers can atone for neglect or mismanagement. They have profited who have planned judiciously and followed up their plans with energy—loss by drouth and tornado excepted.

A farmer to succeed must fix his eye upon results years ahead. Every crop should be put in with reference to improving the soil as well as with a view to present profit. Now is the time for laying plans for the succeeding year. If there has been failure because too much space was given to some one crop, arrange the plan with a view to a variety; some one of the staples almost invariably succeeds—it is unwise to venture the whole year's labor upon a single crop. Thorough preparation of the soil will go far toward securing the winter grain to be sown this month, against the contingencies of the season. A *wet basement* is as unwholesome for crops as for men. Let draining and subsoiling occupy a prominent place in the programme of work for the month.

Agricultural exhibitions are very generally held at the North during this month ; every cultivator has an interest in them. A day spent in carefully examining improved implements, and superior samples of grain, vegetables, etc., will often be worth many dollars in suggestions of practical value. Each should also be willing to contribute whatever would add to the interest of the exhibition.

Buildings of all kinds should be put in thorough repair before the driving storms of Autumn find an entrance. Provide sufficient shelter for all stock. Erect sheds for sheep, and for storing manure.

Beans—Pull and dry, m, l. The haulm (straw) properly cured, and also the beans themselves are much relished by sheep, for which they are excellent food.

Buckwheat—Cut, m, and put up in small bundles to cure. Cart to the barn and thresh out before it shells badly in the field. The straw is of some value for feeding with hay, but alone is a poor dependence.

Butter—Commence laying down for Winter use. If properly worked, it will keep without the use of salt enough to destroy the flavor—if worked too little, salt will not save it. One cent per pound added in extra care in putting up, will make from three to six cents per pound difference in the price obtained.

Cabbages—Market early varieties now matured, and continue to hoe later plantings.

Cattle—Commence feeding grain to those intended for fattening, giving a small allowance daily, and increasing it gradually. Its effect will be felt more than in cold weather. Keep up the flow of milk by giving cuttings from the soiling patch night and morning. Refuse from the garden, beet tops, trimmings of cabbages, etc , will be eaten greedily.

Cellars—Thoroughly cleanse and put in order for the reception of Fall crops of roots, apples, etc. Arrange for ventilation ; destroy rats and mice.

Corn—Examine for the earliest and best ears for seed, and mark each hill to be gathered, traced together, and hung up for future use. Cut the crop up by the ground before injured by frosts, set in stooks firmly bound, to be drawn and husked at leisure. See article "Cutting Corn Stalks," in this number.

Cisterns—Construct if needed, for supplies of water for the house or out-buildings, and also for liquid manures.

Draining—Surface drain furrows should be run through fields sowed with Winter grain, to carry off the surplus water, but this is only the beginning of a good work. Subsoiling and draining with tiles are needed on more than half the farms in the country. Make a commencement upon a small scale, say an acre or so by way of experiment—the results will speedily lead to further operations.

Eggs—Pack in salt a sufficient supply for Winter use.

Fences—Examine and keep in repair, particularly about the corn fields. Build new lines when wanted, but have as few as may be—they are necessary evils at best.

Forests—Continue to cut away, ff, those intended for cultivation.

Grain—Early threshing, especially of that stacked in the field, will save much from the depredations of vermin. Have grain bins secured against rats and mice. Market as soon as prices are fair.

Hedge Rows and Bushes scattered through the grain fields, meadows, etc., or by the roadside, are always out of order. Take them out by the roots.

Hemp and Flax—Pull, m, l, and spread for rotting.

Hogs—Confine to the pens those intended for fattening. They thrive best in separate apartments. Commence feeding grain early. Cooked food will pay best. Read article on a subsequent page of this number.

Manure—Put all the manufactories in order for the coming season. Secure abundant supplies of muck to absorb liquids from the stables and the barn yard. Construct drains and cisterns to save urine. Cart to the barn yard weeds and waste coarse grasses cut from the roadsides and swales. Turn the wash of the roads upon the fields.

Plow, ff, for Winter grain if not already finished. Deepen the soil an inch at each successive plowing. Try subsoiling part of a field, and note the results.

Potatoes—Leave them in the ground until next month unless wanted for marketing. When dug, gather the tops, weeds, etc., to add to the compost heap.

Poultry—Give them free range, and feed regularly, if they have not access to grain stubbles. Collect eggs for Winter supply

Rowen—A good clip may be cut from many meadows, ff. It will afford excellent food for lambs and young stock.

Root Crops—Keep the ground well stirred and free from weeds. The horse hoe greatly reduces the cost of growing these crops.

Rye—Sow, ff, m, if not done last month. Thoroughly cleanse the seed from cockle, chess, and other foul stuff. Oats and the seeds of many weeds will float upon strong brine, leaving the rye at the bottom. See that proper surface drain furrows are cut throughout the field.

Sheep—Read articles on "Sheep Husbandry" now in course of publication in this paper.

Soiling Crops—Cut and feed as wanted, ff, m. Any remaining should be harvested and cured before frosts have injured it.

Sorghum—Commence grinding, ll. It will yield a better quality of syrup if manufactured before frost injures the plant. Sugar is successfully manufactured by the improved evaporators now in use, made after Cook's patent.

Timber may be still cut to good advantage, as noted last month.

Timothy—Sow with wheat or rye, or alone, for future grass crops. If put in by itself, the latter part of August is preferable.

Turnips—Thin late sowings, feed early ones, and keep all well hoed. Sow more of the quick growing varieties on vacant ground, ff.

Weeds—All left to scatter seed will multiply many fold another season. All that have been left to mature should be cut and burned.

Wheat should now be put in as early as may be, on deeply plowed and finely pulverized soil that has received a good coating of manure. Many complaints of winter-killing are owing to late sowing. The growth is not sufficient to protect the roots before Winter sets in. Where it can be done, use the drill in sowing.

Orchard and Nursery.

The principal work of the month in the orchard will be securing and marketing or otherwise disposing of the fruits as they ripen. Most tree fruits are of better flavor if gathered while yet firm, and allowed to mellow in a cool dry room. They also bear transportation much better than when fully ripened. Care and judgment must be exercised to take them from the tree at just the right period—picking a few days too early or too late will make considerable difference in the value. Perfectly sound fruit, not over ripe, will preserve its freshness a long time if kept at a low temperature as in an ice house. Advantage may be taken of this in abundant seasons, to keep part of the crop until prices are improved by scarcity in the market.

The nurseryman is still engaged in budding the peach and other late growing trees, and in renewing the buds on those stocks where former insertions have failed. Every thing about the grounds should be put in readiness for the commencement of the Fall business next month.

Drying Apples—Common sorts which are of little worth in market, will meet a ready sale next Winter if properly dried. Remove all the skin and core, slice them thin, dry quickly but not at too high a temperature, and keep from being wet. A screen of netting over them to keep out flies and other insects, will add much to the appearance. Scatter a few bits of sassafras bark among the fruit when putting it away, to keep out worms.

Evergreens succeed best, transplanted in Spring. If moved now, extra pains will be needed to preserve the roots unbroken. Keep as large a ball of earth as possible about them. Prune such as need it to bring to good form.

Hoeing occasionally will still benefit the nursery row, by destroying weeds, and also by exposing chrysalids of insects. In most cases the use of the horse hoe or cultivator will suffice.

Insects—Allow none to take up their Winter quarters on the trees. Clean the trunks and limbs from scale by washing with strong soap suds, or lye of moderate strength. Read "Follow up the Apple Borer," on page 274, this No.

Labels—Prepare a sufficient supply for use during the coming busy season.

Layering may still be done, ff, m, on new wood.

Manure—Provide an abundant supply, which will be needed for grounds to be occupied by trees set this Fall. Muck and vegetable mold from the woods are of high value for the tree grower.

Pits of peaches, plums and other stone fruits, also seeds of apples, pears, etc., should be placed in earth, or planted where wanted as soon as cleaned. They often fail to germinate when allowed to become dry.

Preserve a full supply of pears, peaches, plums, etc., in bottles or cans for Winter use. Full directions have been given in previous numbers. We are using glass bottles only this year, and with good success.

Pruning is better done earlier in the season, but the present is preferable to Spring.

Plans of the nursery and orchard, with a record of the names and times of planting all trees will be found very useful. Labels are often destroyed, and much confusion results where they are the only dependence.

Seed Beds—Keep free from weeds, and water as may be needed.

Seeds—Gather as they ripen on the trees or shrubs, label distinctly and put in earth, or store for future use.

Weeds and Grass—Continue to hoe out and remove to the compost heap until the close of the season.

Kitchen and Fruit Garden.

This is the season of gathering rather than cultivation, although a few sorts are to be sown to be protected in Winter for earliest crops next year. As fast as plots are cleared of produce, the refuse, tops, sortings, weeds, etc., should be cleared away to feed out in the pig-pen or cattle yard. It adds greatly to the appearance of the garden to fork over and level the ground even if it be not wanted for immediate use. Now is also a favorable time for improving the soil by trenching and draining. These operations are indispensable to successful gardening upon a very large part of the soils under cultivation. If there be not time to go over the whole area, a small plot may be treated annually. The improved yield will soon lead to a like thorough preparation of the whole grounds.

Beans—Gather and shell as they ripen. Limas picked while the pods are still green, and dried in the pod, will afford an excellent dish next Winter. These and other vegetables may also be thoroughly cooked and then preserved in sealed bottles or cans.

Blackberries—Remove the old canes that have finished bearing. Cut out weaker shoots, leaving one or two of the strongest for next season's fruiting.

Cabbage and Cauliflower—Sow, ff, m, to be pricked out in cold frames during October and November. Market early plantings as they mature, and keep later sorts well hoed.

Celery—Earth up once a fortnight, in clear dry weather—never when wet with dew or rain, which will cause rust and decay of the stalks. Be careful that no dirt is thrown upon the crown or between the stalks, and that the stalks are not bruised.

Corn—Select the earliest and finest ears for seed. Choose those from stalks bearing two or more ears. Cut up the stalks as fast as the corn is gathered, and feed out, or cure for Winter use.

Corn Salad and Kale—Sow, ff, m, to be protected through Winter.

Cucumbers—Give plenty of water during the bearing season. Destroy insects by hand picking. Save the ear liest and best specimens for seed. Gather daily while young, for pickles.

Grapes—Pick for market or for wine making, as they ripen. Those intended to be packed for Winter use, may be left upon the vines until the time of frosts.

Hoe growing crops, as turnips, cabbages, etc , to destroy all weeds, and keep the soil light.

Hops—Gather and dry, ff, m, and house the poles.

Lettuce sown, ff, will yield late growth for the table. Sow, mm, l, to be removed to cold frames next month.

Manures—Turn every source of home manufacture to account, rather than depend on buying. By commencing thus early, a good quantity may be stored for use next season.

Melons—Place pieces of board under those ripening—they lose flavor on the side in contact with the ground. Pick as fast as they ripen, otherwise the best aroma will be lost. Save seeds of the earliest and best.

Mushrooms—Make beds or prepare barrels, m, l.

Onions—Pull and dry as they ripen. Sow seed, f, m, for plants to be protected during Winter to come on early in Spring.

Parsley—Sow, ff, m, for use in Spring.

Pickles—Collect for pickling, cucumbers, tomatoes both ripe and green, Winter Cherries, peppers, nasturtiums, etc., etc.

Radishes—Sow, ff, m, for Fall, and, ll, for Winter use.

Raspberries—Follow directions of last month. Collect and house stakes for use next year.

Rhubarb—A few stalks may still be pulled from the Linnæus variety for present use, or for preserving in bottles.

Seeds—Gather, clean, put up in papers and label distinctly, as fast as they ripen. Keep them dry, dark, cool, and out of the reach of vermin. Save finest specimens of beets, turnips, carrots, cabbages, etc., for raising seed next Spring.

Spinage—Sow, ff, and thin out, m, ll, for standing over Winter. A small bed sown now will yield early returns at a season when "greens" will be highly valued.

Squashes—Save seed of early varieties which are now fully ripened. Gather later sorts as they mature. Secure all from early frosts.

Strawberries may still be transplanted, ff, m. They will get a fair start before frost, although August is preferable for making new beds. Give plenty of water to young plants, and keep the surface well loosened.

Tomatoes are now in full yield. Market as they mature. They are very easily preserved in bottles, and will be much prized in Winter and early Spring.

Turnips—Keep late crops well hoed. Thin out if any are crowded. A dressing of bone dust hoed in will be beneficial.

Weeds—Allow none to go to seed upon the premises—it will save much extra labor next year. Gather all which are hoed or pulled up, for the manure heap.

Winter Cherries—Collect daily as they ripen and fall. Preserve those not wanted for immediate use—they make an excellent sauce. They may also be kept enclosed in the hulls, by packing them between layers of cotton.

Flower Garden and Lawn.

The flower borders and pleasure grounds should lose none of their beauty in September. As if to compensate for a loss in number, many of the late bloomers are richer in their coloring, and finer in their forms than the earlier flowers. Nor do the blooms so soon fade; the frequent rains, heavy dews, and cooler nights, preserve them longer in beauty. The dahlia and chrysanthemum are good examples both of beauty and long continued bloom, while many of the bedding plants have lost none of their charms. That no unsightly objects may meet the eye, go through all the departments once a week, at least, and cut away all flower stalks which have performed their office, except those intended to produce seed. Pick off also the dried up blooms and seed capsules not wanted, which will often throw the plant into flower again, besides making it much more attractive.

The present month is a favorable season to arrange for laying out new grounds. Manure can be applied, the soil plowed, spaded, or trenched, as may be needed, drain tiles put in, and the avenues and walks laid out, so that trees and shrubbery can be set next month.

Towards the end of the month some of the more tender green-house and parlor plants, will need to be returned to their Winter quarters, as even a slight frost or a chilly night would injure them. Care should be taken to guard against too sudden a change from sunshine and air to the shade and closeness of a house. Keep all the ventilators and doors open at all suitable times, and water liberally.

Bulb Beds—Make and plant these, m, l. They are easily grown without the elaborate and laborious process often advised in the books. Any good garden soil will answer for bulbs. If wet, drain it, or raise the beds. A little sand, muck, and cow manure well worked into the soil, if compact, fits it to receive the plants. Lay out a bed in any desired form—an oval or circle is a good shape—set crown imperials, hyacinths and tulips in the centre, planting 3 to 4 inches deep and 9 inches apart. Finish with narcissus, crocuses and snow-drops, setting these last 3 inches apart and 1½ inches deep to the crowns. Of course the outer circle should be of the lowest growing varieties, and all should be arranged with reference to the different colors. If sand is easily obtained, place a handful around and over each bulb at the time of setting. In selecting from a collection, choose those which are bright and firm, in preference to any which have begun to grow.

Bedding Plants—Many of these, such as geraniums, fuchsias, lantanas, carnations, etc., may be taken up, ll, cut back strong, and set thickly in boxes of earth and placed in a cool, dry cellar to spend the Winter. They will be stronger in the Spring and give a fuller bloom than plants recently made from cuttings.

Chrysanthemums require careful staking now, or they will be blown down. Remove weak shoots and prune side branches from those trained to a single stem. A full bloom may soon be expected.

Cuttings of both woody and succulent plants should be made early in the month so as to have a full stock to begin the Winter, in-doors. Make the soil light and sandy, insert the cuttings thickly, one third of their length, and cover with a hand or bell glass to prevent rapid drying. A hot-bed frame and sash answer the same purpose. Whitewash the glass for a partial shade, and remove it entirely at night.

Dahlias give the finest blooms late in the season when the nights are cool. On this account many prefer late planting. The early ones usually have a few specimens of imperfect flowers during the heat of Summer, and seldom bloom as freely in Autumn as the late planted ones. They should be in their glory during September, and are really a splendid flower although called "common" by some gardeners. Unless well tied to stakes they are blown about and much injured by the high winds which prevail during this month. Pick off the dry flowers, or seed capsules, as fast as the bloom fades.

Evergreens—Some planters advocate setting during this month, as there is less liability of a drouth than in Spring. After the losses from those planted in May—owing to the long continued dry weather—the advocates of Fall planting are strengthened in their belief. We still prefer the Spring, but if Fall planting is practiced, set the trees, f, m, in cloudy or wet days, disturbing the roots as little as possible.

Flower Pits—Construct, m, ll, for safely keeping tender varieties over Winter, where there are no properly constructed *houses*.

Geraniums and Fuchsias—Cuttings may still be struck in quantity, for a Winter stock.

Gravel Walks, Drives, etc.—Keep as free from weeds and grass, and as well raked, as earlier in the season.

Hedges—The principal shearing, according to the advice previously given, has been upon the top, so that the bottom is now thick and well set. Shorten in the base and leave for Winter.

Lawn—Keep neat and clean, mowing and raking occasionally. Scatter seed over any thin spots.

Lilies, Pœonies, Dicentra, and other perennial bulbous or tuberous rooted plants which have done blooming, may be divided and reset, m, ll.

Roses—Bud, ff, any omitted last month, and still to be changed. Inarching is a more desirable method to introduce several varieties upon one standard. The stocks can be brought in proper positions in pots.

Seeds—Watch their ripening and collect before they are wasted on the ground. Mark each package with care.

Trees are now ripening the present season's growth and preparing for Winter. Late heading back is not advisable, it induces new shoots which will not harden off sufficiently before cold weather,

Verbenas and Petunias—Pot layers, f, m, to preserve a stock for Winter and early Spring bloom. Layers may still be made by simply covering a part of the base of the straggling branches, which readily take root.

Weeds—Allow none to seed the ground late in the season. Keep them well hoed up, both on their own account and to stir the soil about the growing plants.

Green and Hot-Houses.

The first thing to be done this month, is to put the houses, frames, pits and conservatories in perfect order for receiving plants. Give a thorough fumigation and syringing to destroy insects. Arrange the pulleys, replace the broken glass, batten or otherwise stop any cracks, repair the furnaces, flues, and hot water pipes, cleanse, whitewash and paint the wood work so that every thing may be in perfect repair, sweet and clean, for the reception of the Winter plants, some of which will need housing by the middle of the month, or as soon as the mercury falls to 40°. A large quantity of leaf mold, loam and sand should also be collected to use now and during the Winter. If possible have it mixed some weeks before use—months would be still better.—Provide a good supply of pots of different sizes.

Everything being complete, and the paint well hardened, commence bringing in and arranging the plants, f, m, according as the weather is warm, or cool, beginning with the most tender varieties. Place the taller plants on the back shelves, and low kinds in front, bearing in mind at the same time that some varieties require more light than others. Arrange them near or at a distance from the furnace as they need a strong or light heat. A dry shelf should contain those plants which require very little water, including most of the bulbous kinds. Having brought them all in before cool nights have checked their growth, it will be necessary to admit abundance of

Air by the upper and lower ventilators, closing at night during cool weather. The change from a free exposure will be great, at best, and should be counteracted as much as possible by airing freely.

Annuals may be sown at intervals during the month to furnish a variety of bloom in Winter.

Bulbs—Pot, ff, m, and keep in a cool place to be taken to the forcing apartments as wanted. They make a fine show when blooming at intervals during the Winter.

Camellias should be repotted, ff. They are now beginning to grow and require frequent waterings. It is not too late to bud and inarch.

Fire heat may be needed in some apartments, m, l, to expel dampness and raise the temperature.

Grapes—Those in the forcing houses have been cut, and cold graperies are ripening their fruit, while in the retarding houses the berries have not yet began to color. The treatment must be governed by the different stages of growth, giving little water and abundance of air to those ripening, and frequent syringings to the later ones.

Potting—Most of the plants will need repotting when brought in, although they have been growing in pots during the Summer. They will do better with a change of soil, and quite likely they require more room. But the large number of plants set in the borders in the Spring are all to be potted now. They should be shaded after the operation and watered freely. Many of the plants will be benefitted by cutting back.

Apiary in September.

BY M. QUINBY.

Bees will add nothing to their stores, in most places, after the 10th of this month. In a few favored localities, where but few stocks are kept, and an abundance of golden rod is found, they may increase their stores till Oct. As soon as flowers cease to yield honey, the bees will be on the lookout for a supply from other sources. The strongest stocks in the yard are the worst of any. One would think, judging by their actions—that such were on the point of starvation, but it is only the principle of "much wanting more." *Every* hive should be examined *now*—it may be too late next week. Bees sometimes deteriorate very fast. It will not do to suppose because a stock was first rate in May, and sent out three or four swarms, that it is therefore in the same condition at this season. *See what they are now.* All defenceless ones—the weak colonies—should be put out of harm's way at once, before other bees are tempted into bad habits. The *neighbors* that complain of "first rate hives being robbed," should give seasonable attention to this point. Adopt the rule to expose no refuse honey, or allow no swarms but those strong enough to remain after honey fails. Bees will not begin to rob strong stocks on the start. If it could be understood that the man who had his bees robbed in the Fall, was alone to blame, we should hear less complaint.

A colony too weak to defend its stores now, can not be wintered with all possible attention, and should be put out of the way. Two or three weak ones may be united, when standing near together, and by feeding judiciously, may be wintered. Any hive yet remaining queenless, uninjured by the moth, with stores sufficient for wintering a colony, may have the bees and queen from some condemned stock or swarm introduced. A new swarm that has worked combs without a queen, will have too much drone comb to make a profitable stock, and should be broken up, even though it has stores sufficient for Winter. A part of the honey in such hive, will be beautifully white, while another part will be nearly all bee-bread, not sealed; this is worthless. Another portion will be mixed—some cells partly filled with bee-bread, and finished out with honey and sealed over. This can be readily detected by holding it up to the light. That containing some honey, yet unsuitable for the table, can be fed to light stocks.

In many sections *all* old stocks should be examined to detect foul brood. Those in which the disease is confirmed, should not be kept as stocks another year. If weak, immediate removal is necessary, to prevent other bees appropriating the honey—it is nearly certain to produce the disease in every hive that gets it. There are some colonies diseased just enough to spoil them for stocks, yet they may be united; but it requires a great deal of care to make such safe from robbers till transferred in the Spring. There must also be some partially filled hives preserved through the Winter to receive the bees. To have the full benefit of the transfer, it should be done in March or April. Without some combs and a few pounds of honey, a colony would not probably do anything. A young swarm, or old colony that has stored only ten or fifteen pounds of honey, intended for this purpose, may stand till next month, that all the brood may be hatched. Contract the entrance so that only one bee can pass at a time, unless it is certain that they are strong enough to repel all robbers. These light hives can be saved to advantage till another swarming season. The brood in them should all be matured, and no dead bees left between the combs. The hive must stand right end up through the Winter, otherwise the honey that leaks out will soak into the wood at the top, and loosen the combs. Let this honey freeze thoroughly through the Winter. If the Fall continues warm, worms may hatch, when it will be necessary to apply the sulphur match to destroy them. There will not be any worms to trouble such hives another year until quite late, making them very valuable for stocks. A hive half filled with combs containing a few pounds of honey, that has a good colony introduced early, will be filled, and cast a swarm about as early as one that has wintered its bees and is already full. Waste no combs that can be made available for the bees another year. Save the white combs for surplus boxes; that too dark for this purpose—unless it contains drone cells—may be fastened into the hives to receive the new swarms. It is worth much more for these purposes than to melt into beeswax.

The Crops for 1860—Good Prospects for Farmers.

It will be no news to a large proportion of our readers, to report that most farm crops are yielding better this year than for a long time past—they have the proof of this before their own eyes. There are exceptions, however. Were we to form an opinion from our own experience, we should say that crops were never worse. Never have we known so severe a drouth as has prevailed just around us. Yesterday and to-day, (Aug. 13th and 14th,) for the first time since breaking ground in Spring, have we had rain enough to wet down to the lower roots of corn and potatoes. Our fruit and ornamental trees have made scarcely any new growth of wood, and many of those set last Spring, have literally dried up. Potatoes, after a hard struggle, have produced some small tubers, and then succumbed to the parching heat. Early planted corn that got its roots down deep into the soil before the dry season, is doing finely, but the later planted is shriveling, and will not yield half a crop. Winter grains were not greatly injured, as they were far advanced, and the roots too deeply established in a warm, moist, but not over wet soil, to suffer before maturity. Early sown Spring crops got out of the way of the drouth, but everything put into the ground after May 1st has suffered. The grass crop, which needs abundant moisture in Spring and early Summer, has suffered very materially. With us hay is already worth $18 to $20 or more per ton, or one-third more than at this time last year.

What we have said of this region, applies to several other limited localities; at some points, in parts of Kansas, for example, the drouth has been so severe, that actual starvation stares many a husbandman in the face. But we are glad to know that these are exceptions to the general rule. While we and some of our readers must be content with half filled, and even empty barns, we will nevertheless rejoice with the great mass of those who are more fortunate. From almost every part of the country there comes up a general thanksgiving. Never before have there been seen such vast fields of waving corn, whose towering stalks stretch far upward, and are thickly studded with well developed ears. The splendid weather in April and May favored the preparation of the ground, and the planting of a large surface, and it was well improved by farmers. The season has been so exactly adapted to this crop, that it is already advanced almost beyond the contingency of an early frost.

From all we can gather, we judge that in from one-third to one-half of the country, the grass crop was a comparatively moderate one—in some places it was very short—but in the other half or two-thirds, the yield was fair, and the abundance of corn stalks and of straw, if properly cared for, will make up for any deficiency in hay. In some places, wheat is not grown so extensively as in former years, though a larger breadth was sown almost everywhere, than during the previous two or three years. But taking into account the increased amount of land sown to wheat last Fall and in Spring, in the country generally, and the unprecedented good quality of the Spring wheat, we hazard nothing in saying that the wheat crop of the United States for 1860 will exceed that of any former year by many millions of bushels!

A single fact is strongly indicative of the unusually good prospects of farmers. *The direct correspondence between the Agriculturist Office and the cultivators of the country, by far exceeds that of any other newspaper office or other establishment in the world*, and the casual remarks which are contained in our letters, written without any commercial end to serve, are the most reliable indications of the real condition of the crops. Usually, during May, June, July, and August, we are accustomed to read a vast number of complaints of poor crops. Every one suffering from rain, or drouth, or other cause, actually or in imagination, is prone to speak of it to his neighbors, and especially, when writing on business or otherwise to his agricultural paper. *During the present year, our letters containing complaints of this kind, have scarcely been* ONE IN A HUNDRED *to what they were in the two or three preceding years!* This circumstance is strikingly significant of the general good prospects and consequent buoyant hopes.

And not less important to our cultivators are the *market prospects*. A large surplus crop on one's hand, would be of comparatively small value, if there were no demand for it, or if only a minimum price could be obtained. But this is not the case now.

The revival in all branches of business, stimulated in part by the agricultural prosperity, and in part by a natural reaction from the depression of the past three years, greatly increases the home consumption; while moderate crops abroad create a large export demand. Within sight of our office are numerous ships loading with breadstuffs for foreign ports, and every water craft that can carry a cargo of corn or wheat across the ocean, is being pressed into service. The prospect, therefore, is, that though the amount of our crops will prevent the rise of prices to the high figures ruling prior to the Fall of 1857, yet it is probable that remunerative prices will be obtained for the surplus breadstuffs our farmers have to part with.

But let no one raise his expectations too high. The country is deeply in debt—resulting from the mad career of speculation into which ninety-nine out of a hundred were drawn before the crash of 1857. While the good crops of this year will relieve the country from the immediate painful pressure which has weighed us down for many months past, other years of effort, and toil, and economy, will be required to throw off the incubus of debt. While we go to work with greater courage, and higher hopes, let us draw lessons of wisdom from the past. Let us not discount the future—nor borrow to expend now what we *hope* to have the ability to pay hereafter. Let us write upon the lintels, and post up on every conspicuous object around us, "PAY AS YOU GO!" Let us be content with our present acres until they are our own, and not bind ourselves for more until we surely know how they are to be paid for, which was not the case when our present liabilities were assumed. Let us be content with our present enforced style of living and dress, until our present 'store debts' are liquidated, and we have in hand the means of procuring not indispensable luxury and finery. Put not the price of an acre of wheat or corn, or of a horse or a fat bullock, upon the back in the form of a silk dress, or fine coat, or in household furniture, until the acre of produce is grown, or the bullock fattened, wherewith these articles are to be purchased. Live as comfortably, or as luxuriantly, as you can, but first get out, and then keep out of DEBT!

Go to the Fairs.

The fair season has already opened, when the treasures of the field and orchard, the garden and hot-house, the sty and the stable, are temptingly displayed under white tents, and in rough board stalls. The very name of *fair* calls up long loaded tables of luscious fruits, purple clusters of the vine, downy peaches, plums blushing through the powdered bloom, heaps of yellow pears and crimson apples, great rows of bags stuffed with premium wheat and rye, pens of sleek porkers and patient sheep, stalls of neighing steeds and smooth ribbed cattle, and last but not least, acres of good natured men, women, and children, mostly hailing from the farm, and given up to the enjoyment of the festal day. We are sorry to learn that some of the fairs will be altogether omitted this year, and that in many others prudence will compel the absence of all the bovine tribes. Stately Durhams, comely Devons, and homely Alderneys will no more occupy the stalls. The pulmonary murrain is a reality in many of our districts, and it is doubtless the part of wisdom to prevent all unnecessary herding of cattle.

But without this special attraction of our Autumn shows, they are well worth attending. We consider them worth far more than they cost, as a holiday for farmers. As a class we are more overworked, and have fewer opportunities for social gatherings and enjoyment than other people. The farm, as a rule, is short handed, having at least three times as much work on hand as can be done by the present laboring force, and there never seems to come a day of relaxation. The boys can not go a fishing until planting is over, and then they must take a rainy afternoon. Then hoeing is pressing, and the mowing presses still harder, and the scythes are hardly put up for the Summer before the fairs are announced. It is meet after the fatigues of the Summer work are over, that all the sons and daughters of the farm should have a grand rally, and look at each other's faces, as well as at the products of the soil. Old ties of friendship are strengthened, and new acquaintances mutually pleasant and profitable are formed. The day is a bright spot in the circle, and a thousand pleasant memories cluster around it.

But there is direct utility, as well as social enjoyment in these occasions. It is impossible that the industry of a whole county should be fitly represented at a fair without furnishing many profitable suggestions to every intelligent farmer. Our farms are by no means so well stocked with tools and the best breeds of animals, that there is not room for some kind of improvement on almost every farm. Every one who goes with a disposition to learn, will find something new, some invention saving labor, or some suggestion that will make present processes of labor more productive. The mind will receive a large accession of pabulum for future digestion, and the facts of a day will furnish thoughts for a year.

We say then go to the fairs and take up the wife and children, and have a real good time once in a year. Send up beforehand the best products of the farm, if possible, but by all means go yourself, note book in hand, and use your eyes and pencil when you get there.

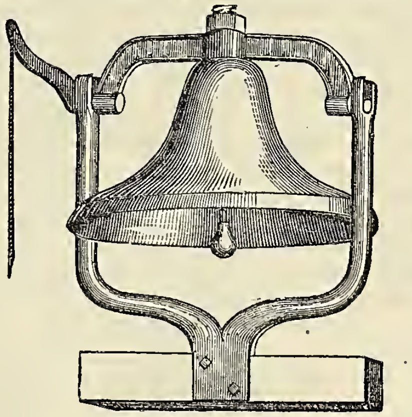
A Hay Crop Saved by a Barometer.

"John Underwood, Esq., of Aurelia, N. Y., secured his entire crop of hay this Summer by consulting the barometer. The morning on which he commenced cutting his hay, looked cloudy and felt like rain, still the barometer pointed unerringly to dry weather, and on the strength of that he sent in his mowing machine. The hay was cut, cured, and secured, before any rain made its appearance. But for the barometer, the hay would have been standing at this time. Who doubts that the instrument paid for itself by that item of information? The time is coming when the farmer will as soon think of returning to the scythe, as to be without the infallible weather prophet, the barometer.—*Auburn Advertiser*."

The above is putting the case rather strongly; it is not probable that "but for the barometer the hay would have been standing at *this* time," for there was plenty of hot, dry weather following the morning referred to; but we doubt not that the barometer was of great utility at the time mentioned, and that a day's time was saved, and the hay gathered in superior order. Since we commenced making daily observations upon the aneroid barometer, described last month, we have been impressed more strongly than ever before, with the great utility and importance of this instrument to farmers. During the dry weather, prevailing here all through June, and nearly through July, the barometer index remained almost *steadily* at a point above 30 inches, though every slight shower that fell, was indicated by a rapid declension of the index hand, from two to ten hours in advance. The other day, we remained at home writing until after dinner, and then went down to our city office. The sky being clear, with no indications of rain, we went thinly clad from head to foot. On reaching the office, clouds had begun to gather, and the barometer had fallen nearly half an inch, which our associate informed us, had occurred within an hour. We obeyed its injunction, and started at once for home, and had scarcely arrived there, before a heavy fall of rain commenced, accompanied with thunder and a strong wind. The barometer in that case certainly saved us a disagreeable wetting, and perhaps a cold. This is only one of several similar instances of the positive indications of rain, which have been given by our barometer during a few weeks past.

The contrary indications have been scarcely less marked, for several times there has been every sign of rain in the heavens, when the barometer remained unmoved, and in no such case has rain fallen. Here is one example. We had planned to take our family to see the Great Eastern early on the morning of July 25. On rising in the morning, the sky indicated a rainy day, and we were in doubt whether to defer the visit or not. A glance at the barometer showed no change in the index for 24 hours, and we determined to follow its indication. The result was, we had a fine day, and an instructive and pleasant visit to the "big ship." As it turned out, we could not have gone on any subsequent day of her stay, and but for our barometer, would have lost the opportunity of inspecting her.

We particularize the above instances, to illustrate the practical utility of the barometer. The truth is, science is continually contributing in a thousand ways not only to comfort and convenience, but also is aiding in more successfully performing the various operations of active life.



Farm Bells.

"Call me anything you like, if you don't call me too late to dinner," is the rather stale but expressive adage of the farm laborer, and of the mechanic as well. We have not forgotten the old tin-horn whose mid-day "toot" had, at that particular hour, more music in it than the finest toned organ. A neighbor's bellowing conch shell, brought from the sea-board to our western wilderness, was an enviable piece of household furniture, in more respects than one; but it needed the owner's stout lungs and long practice, to make it effective over the farm a mile in length. On some occasions, when the wind, or the great distance rendered the long tin-horn useless, the white flag in the chamber window, or vigorously waved by the housemaid who had climbed to the top of the wood-pile, was literally a "flag of truce"—to the struggle with hard work.

But the tin-horn, the conch, and the white or red flag—one or the other of which is inseparably connected with every one's remembrance of farm life as it was—are fast giving way to the modern improvement of farm bells, which, suspended upon the house ridge, or upon a supporting pole, are now as common on the larger farms in the older sections of the country, as the church-going bell is upon the "meeting-house." Brass, or steel bells, or triangles, costing 25 to 50 cents a pound, are, however, yet too expensive for general use; and they are no longer needed. By a recent invention, very good bells are now made almost entirely of cast iron, hardened and refined by some peculiar process, and slightly amalgamated with a small quantity of some other material, we believe. The sketch given herewith, is taken from one of these bells, weighing 50 lbs., which we have seen retailing for $6, including the yoke, standard, and crank, and a "warranty" for one year. This is only 12 cents a pound for the bell, and at this price they are being rapidly manufactured of various sizes, for farms, school-houses, steamboats, factories, and even for churches. We hear of one being made for a church in New-Jersey, which weighs 5,000 lbs.

A farm bell suspended near the dwelling, is certainly a convenience, not only to call the "men" to dinner, *en masse*, but also to regulate the hours of work. Agreed signals, such as a ring followed by a single stroke, or by two, or three, or more, or by tolling, and other variations, will serve the purpose of a farm telegraph, to communicate intelligence, to call any particular man or boy, to give notice of the swarming of bees, sickness, etc., etc. The low price of these new bells will tend to their general introduction.

The Italian Bees—Improving Bees by Breeding—Stingless Bees.

We are yet unable to offer any well founded opinion, as to whether the recently imported Italian Bees will prove really superior to our common native bees, or not. They are being rapidly propagated and diffused over the country, and to secure this result the main effort is now directed. Another season will be required to determine their merits. The fact that so many of our older aparians have considerable confidence in them, argues well in their favor. We have watched their multiplication from a single swarm, and if the rate of increase be as great at other points to which the queens are being daily dispatched, it will not take long to fill the country with them—if such a consummation be desirable. Below we give an extract from a letter dated Aug. 10, written by Mr. E. A. Brackett, the well known Sculptor, who is an enthusiastic amateur in bees also. His suggestion in regard to improving bees by care in selecting breeding queens, is worthy of attention. All kinds of domestic animals have been brought to a much higher standard by special care in breeding. Why may not our common bees be in like manner improved? No attention has been given to this subject, so far as we know. Let some of our bee-keepers try the experiment.

Who knows but that in a few years we may get a race of bees that shall rival the humblebee in size, and in ability to extract sweets from a large class of deep tubed flowers, such as the red clover, and others, which are now useless for the common honey bee. We hope, those who undertake this enterprize, will remember to try to breed out their stings. From a honey bee of the size of a humblebee, with the sting developed in proportion, may the fates deliver us. (Talking of stingless bees, we may mention, that our friend A. O. Moore, Esq., who recently returned from a tour of several months in Central America, brought with him two varieties of stingless bees, which he left in our office for several days. They are quite peculiar and interesting, and we hope to give a further description of them, with engravings of their appearance, mode of depositing honey, etc.) Here is the extract from Mr. Brackett's letter referred to above:

"....I think it too soon to form any certain opinion in regard to the Italian bees in this country. We must, therefore, still in a great measure depend on the statements of German bee-keepers, and that is universally in favor of their great superiority over the black bee. Dzierzon states, that since he has Italianized his apiaries, his yield of honey has been double that obtained from the same number of common bees. My experience, thus far, satisfies me that they have not been overrated. The queens are larger and more prolific. The workers, when bred in comb of their own building, are longer, and their honey-sacks larger. They are less sensitive to cold, and more industrious. In all my handling of them, (and I have done so pretty freely, lifting the combs, and examining them almost daily,) I have never known one to offer to sting.—A queen that I received in June, and introduced to a strong stock of bees, in eleven days filled thirteen sheets of comb with brood and eggs. There is at present scarcely a black bee in the hive, so rapid has been the change. Although I have taken from it large quantities of worker brood and sealed drones, the hive is still overflowing.

Allow me to suggest to you an idea, that may be of importance. These bees come from the Italian Alps, where they have received little or no attention. They are in a state of nature, susceptible, in my opinion, of great improvement, (at least as far as form and color goes,) by culture and careful breeding. In order to do this, they should be allowed to build their own comb, as soon as may be, and the largest and best colored queens be selected to breed from—avoiding breeding in-and-in as much as possible.

I have received a letter from a friend, stating that one of his queens is quite dark; and he seems troubled about it. A little knowledge, if not a dangerous thing, is sometimes an uncomfortable one. Every one at all familiar with the common black bees, knows very well, that their queens vary much in color, and I see no reason why the Italians should not do the same within certain limits, and still be true to the race. Those who are anxious to have high colored queens, must resort to careful breeding...."

Hints on Sowing Wheat.

The diminished ravages of insects, and the promise of remunerating prices as the country recovers from its financial depression, will doubtless lead to much greater attention to wheat growing. The prospect is, that more ground will be sown to wheat this month than in any former September since our country was settled. A few hints to those about to sow wheat may be useful.

Prepare the ground well. If man and team labor be not abundant, better concentrate your efforts upon twenty acres, than to 'run over' twenty five. The yield from the smaller area well prepared, will be quite as great as upon the larger one poorly tilled, and you will save the seeding and harvesting of the extra five acres. A thorough pulverizing of the surface with the plow and harrow, and with the roller if needed, is of great advantage to wheat. One good plowing, turning the surface deeply under, is desirable, whether for Summer fallow or corn land. Let the after plowing and harrowing be shallow, to avoid disturbing sods, stubble, and weeds turned under.

All soils liable to standing water in Winter or Spring, should be thrown into ridge lands twelve to twenty feet wide—the wetter the land, the nearer should be the ridges and furrows. When all is complete, the dead furrows should be deeply and thoroughly cleaned out with plow and hoe, so that all surplus water will flow off. This is a most important point. It is the alternate thawing and freezing of water-soaked soils that produces winter-killing. Water expands and contracts greatly at every change of temperature, and thus breaks and tears the roots of Winter crops, sometimes killing the plants entirely, and always injuring them more or less. On well drained land, wheat is never winter-killed, and seldom fails to start off vigorously in Spring.

Sow the largest, plumpest seeds. On this point see remarks under manures, last month, page 228. If possible, run seed wheat over a coarse screen that will take out all small kernels, and foul stuff. It is better to always sow wheat with a drilling machine. If sown broadcast, take the greatest care to distribute the kernels evenly. Half a bushel of seed, sown uniformly over the ground, and covered uniformly, will produce more than two bushels sown hap-hazard. One seed, with plenty of room to receive air and sun-light, will produce more and better grain than three or four seeds planted side by side.

Sow wheat *early*. Nature sows her seed as it falls from the previous crop. Reason, and universal experience are in favor of putting the seed into the ground as early as possible after the previous crop is secured. This enables the plants to become well established, and thus be better able to withstand Winter. Early wheat also gets ahead of many of the insect tribes.

Manure seldom fails to pay its cost and a hundred per cent interest—that is on all soils not already fully supplied with organic matters. It will not, of course, pay to buy manures for new land where there is already an accumulation of vegetable matter. Lime or ashes generally show good effects on this class of soils. On older fields, plaster, Peruvian guano, and bone saw-dust, are valuable, where stable manure is scarce. We do not believe it pays to buy the mineral manures so industriously pushed upon wheat growers.

For the American Agriculturist.

Shall we Sow Wheat?

This question is asked by those living where, they say: "Once as large and as fine crops of this grain were raised here as could be found, but of late years the yield has been so poor as to scarcely pay for harvesting, and hundreds of acres formerly devoted to wheat, are now sown with rye." Several causes are assigned for this failure. Some are of opinion that wheat can be grown only upon virgin soils; that in a few years the fertility, or those elements necessary for this special grain, are exhausted, and we must look to the newer land of the West for wheat, the most important of breadstuffs. Others say insects, particularly the midge, have taken possession, and render useless all attempts to secure a paying crop. The abundant yield generally obtained by those who ventured a trial last Fall, has attracted attention to the subject, and awakened a desire to venture again.

It may be safely laid down as a general principle in agriculture, that influences unfavorable to the production of a crop that has at one period flourished well, may be overcome by proper application of skill. Doubtless the virgin soils of which correspondents write so regretfully and with such fond recollections of the good old times when thirty bushels of wheat was a sure thing, have deteriorated from their former productiveness. Under the too prevalent system of farming pursued in past years, the only wonder is that they should have held out so long. From time immemorial these lands had been receiving a yearly dressing of leaves from the forests that waved above them, where the thick growth prevented much ripening of seed and consequent exhaustion of the soil, which was thus year by year receiving more than it gave out, and accumulating the rich stores of plant-food which have since been transformed to golden harvests, and removed to the barn and the market. Seed-bearing is from its very nature most exhaustive of fertility. The seed is the condensed nutriment stored for the wants of the young plants that are to succeed it—and when year after year we remove from three quarters of a tun to a tun of wheat, we take away so much of what may be termed the very essence of fertility in the land. Had a proper system of manuring been kept up year by year, the wheat crop need never have failed from this cause. As it is, not one, nor three, nor scarcely seven years will suffice to bring up the soil to the strength necessary to give those "good old-fashioned crops of wheat, we read of." For we have not only to apply the raw material, but it must be thoroughly worked over and over, and completely incorporated with the soil, making it one homogeneous, fertile mass, before the wheat roots can feel at home. Until this, the original state before cropping, exists, they must go hunting around among the exhausted particles for now and then a rich deposit, and be alternately starved and surfeited. Were it possible to sift together one foot in depth of the surface soil and the requisite quantity of finely divided manure, we should see from ground so prepared, a crop that would make even old wheat-growers laugh for joy. This we can do gradually year by year. We may well begin by subsoiling and draining, lowering the water line, giving the roots a chance to enter new pasture ground still fertile, and then by thorough manuring and cultivating the surface, restore exhausted fertility there. The renovation of worn out wheat fields must date principally from the increase of the manure heap; for full particulars, inquire at the muck deposits and the waste leakage of the barn yard.

But the wheat flies, those almost microscopic insects, which by their formidable numbers have fairly driven us from the field—can their ravages be prevented? Thanks to the researches of entomology, and the experiments of observing agriculturists, we have learned to circumvent them. Wheat brought to early maturity, suffers comparatively little from their attacks. The insect deposits its eggs about the time wheat ordinarily is coming into bloom, and the larvæ hatch out in time to feed upon the young kernel before it hardens. By hastening the blooming period a week or ten days, the grain will be sufficiently advanced, in most instances, to resist the efforts of the midge to obtain sustenance, and the danger will be averted. We need then early varieties of wheat. Recent experiments show that wheat brought from the South retains its early ripening propensity for two or three years at least. Several sorts have naturally an early ripening period. The Mediterranean, White Mediterranean, Early May, and Dayton are all well spoken of; the first named variety has for years been a favorite, though not equal in quality to some others. The Soules variety if seed could be obtained from Southern districts would be likely to do well.

Early sowing on land properly drained and manured, will tend to insure earlier maturity of any sort, and if in addition to this, care were exercised to select seed year by year from the earliest ripening portions of the field, there is little doubt that wheat could be put out of danger of the midge. In this latitude I advise putting in the crops early in September, and South as far as 40° every thing should be completed before the first of October. Believing then that the two great obstacles to successful wheat growing may be removed, I say let its culture be undertaken again; but not unless the producer is willing to take the pains necessary to insure success.

GENESEE.

Agricultural Exhibitions for 1860.

[The following list includes all the forthcoming Exhibitions reported to the office of the *American Agriculturist* up to August 20th. They are arranged in order of time—the figures denote the opening and closing days.]

STATE EXHIBITIONS.

Name:	*Where held.*	*Date.*
National Horse Show	Springfield, Mass.	Sept. 4— 7
Kentucky Central	Danville	" 4— 7
New-Jersey	Elizabeth	" 4— 7
Tennessee	Nashville	" 10—15
Illinois	Jacksonville	" 10—15
Am. Pomological Society	Philadelphia	" 11—14
Vermont	Burlington	" 11—14
National Horse Show	Kalamazoo, Mich	" 11—14
U. S. Agricultural Society	Cincinnati	" 12—20
N. E. Kentucky	Ashland	" 18—20
Kentucky	Bowling Green	" 18—22
Nebraska	Omaha	" 19—21
California	Sacramento	" 19—26
Wisconsin	Madison	" 24—27
Pennsylvania	Wyoming	" 24—27
Tennessee Central	Franklin	" 24—28
Missouri	St. Louis	" 24—29
Ohio	Dayton	" 25—28
Maine	Portland	" 25—28
Minnesota	Fort Snelling	" 27—29
Missouri Central	Booneville	Oct. 1— 5
New-Hampshire	Manchester	" 2— 4
Iowa	Iowa City	" 2— 5
Michigan	Detroit	" 2— 5
New-York	Elmira	" 2— 5
Missouri S. E	Cape Girardeau	" 11—13
Indiana	Indianapolis	" 15—20
Mississippi	Holly Springs	" 16—19
North Carolina	Raleigh	" 16—19
Virginia Central	Richmond	" 22—27
Georgia	Atlanta	" 23—26
Alabama	Montgomery	"29—Nov. 2
Maryland	Baltimore	"30 " 6
South Carolina	Columbia	Nov. 13—16
Lower Georgia	Savannah	" 22—
Geo. Cotton Pl's Conv'n	Macon	Dec. 3—22

COUNTY EXHIBITIONS.

CALIFORNIA.

Sonoma	Petaluma	Sept. 4— 7
Santa Clara	San Jose	" 18—21
Contra Costa	Martinez	" 25—27
Bay District	San Francisco	Oct. 4— 9

CONNECTICUT.

Windham	Brooklyn	Sept. 12—14

GEORGIA.

Hancock	Sparta	Oct. 16—20

ILLINOIS.

Cass	Virginia	Sept. 4— 7
Jo. Daviess	Galena	" 11—14
Carroll	Mount Carroll	" 17—19
Livingston	Pontiac	" 18—20
Hancock	Carthage	" 19—21
Rock Island	Rock Island	" 19—21
Whiteside	Morrison	" 19—21
LaSalle	Ottawa	" 25—28
Ogle	Oregon	" 25—28
Knox	Knoxville	" 25—28
Stephenson	Freeport	" 26—28
Tazewell	Tremont	" 26—28
Dupage	Wheaton	" 26—28
Lee	Dixon	Oct. 1— 5
Macon	Decatur	" 1— 5
Lake	Libertyville	" 2— 3
Pike	Pittsfield	" 2— 4
Scott	Winchester	" 2— 4
Macoupin	Carlinville	" 2— 5
Peoria	Peoria	" 2— 5
Putnam	Hennepin	" 2— 5
Adams	Quincy	" 2— 6
Henry	Cambridge	" 3— 5
Monroe	Waterloo	" 16—18

INDIANA.

Union	Russellville	Sept. 3— 8
Lawrence	Bedford	" 4—
Monroe	Bloomington	" 4— 6
Fayette	Connersville	" 4— 7
Dearborn	Lawrenceburg	" 10—11
Putnam	Greencastle	" 10—14
Rush	Rushville	" 11—14
Shelby	Shelbyville	" 11—14
Washington	Salem	" 11—14
Clark	Charlestown	" 12—14
Ripley	Versailles	" 18—20
Montgomery	Crawfordsville	" 18—21
Decatur	Greensburg	" 18—23
Laporte	Laporte	" 19—20
Allen	Fort Wayne	" 19—21
Morgan	Centerton	" 25—28
Miami	Peru	" 26—28
Jasper	Rensselaer	" 26—28
Sullivan	Carlisle	" 26—28
Wells	Blufton	Oct. 2— 3
Posey	New Harmony	" 2— 5
Vermillion and Parke	Montezuma	" 2— 5
Warwick	Booneville	" 2— 6
Martin	Dover Hill	" 3—
Noble	Albion	" 3— 4
Whitley	Columbia City	" 3— 5
Kosciusco	Warsaw	" 3— 5
Steuben	Angola	" 4— 5
Orange	Livonia	" 8—13
Gibson	Princeton	" 9—12
Spencer	Rockport	" 10—11
Fountain	Attica	" 10—12
Fulton	Rochester	" 12—13

MARYLAND.

Frederick	Frederick	Oct. 16—19

IOWA.

Jackson	Andrew	Sept. 19—20
Marshall	Marietta	" 19—21
Warren	Indianola	" 20—21
Poweshieck	Montezuma	" 22—23
Delaware	Delhi	" 25—27
Bremer	Waverly	" 26—27
Appanose	Centerville	Oct. 5— 6

KENTUCKY.

Clark	Winchester	Aug.30 Sept.1
Bourbon	Paris	Sept. 4— 7
Harrison	Cinthiana	" 8—12
Warren	Bowling Green	" 18—22

MAINE.

Hancock	Ellsworth	Sept. 26—27
West Washington	Jonesboro	" 27—28
Androscoggin	Lewiston	Oct. 2— 4
North Aroostook	Presque Isle	" 3— 4
Piscataquis Central	Dover	" 3— 4
Franklin	Farmington	" 3— 5
Sagadahoc	Topsham	" 9—11
Kennebec	Readfield	" 9—11
Waldo	Belfast	" 10—12
Oxford Union	East Sumner	" 16—17

MASSACHUSETTS.

Highland	Middlefield	Sept. 13—
Middlesex North	Lowell	" 13—
Middlesex South	Framingham	" 18—19
Hampden East	Palmer	" 18—19
Middlesex	Concord	" 20—21
Hampden West	Springfield	" 21—
Bristol Central	Myricks	" 25—26
Essex	Danvers	" 25—
Worcester North	Fitchburgh	" 25—
Housatonic	Great Barrington	" 26—27
Worcester West	Barre	" 27—
Norfolk	Dedham	" 27—28
Franklin	Greenfield	" 27—28
Bristol	Taunton	Oct. 2— 3
Worcester	Worcester	" 2— 3
Berkshire	Pittsfield	" 2— 3
Barnstable	Barnstable	" 9—10
Worcester S. E	Milford	" 9—10
Hampshire, Franklin and Hampden	Northampton	" 11—12
Plymouth	Bridgewater	" 11—12
Worcester South	Sturbridge	" 11—
Hampshire	Amherst	" 11—12
Nantucket	Nantucket	" 11—12
Martha's Vineyard	West Tisbury	" 16—

MICHIGAN.

Lenawee	Adrian	Sept. 25—27
Lapeer	Lapeer	" 25—27
Ingham	Mason	" 26—27
Berien	Niles	" 26—28
Macomb	Utica	" 26—28
St. Joseph	Centerville	" 26—28
Sanilac	Lexington	" 27—28
Van Buren	Paw Paw	" 28—29
Oakland	Pontiac	Oct. 10—12
Washtenaw and Wayne	Ypsilanti	" 10—12

MISSISSIPPI.

Marshall	Holley Springs	Oct. 2— 5
Lowndes	Columbus	" 9—12
De Soto	Hernando	" 9—13
Franklin	Meadville	" 11—13
Monroe	Aberdeen	" 16—19
Warren	Vicksburg	" 18—
Oktibbeha	Starkville	" 23—25
Chickasaw	Okalona	" 23—26
Grenada	Grenada	Oct. 30 Nov. 2
Pontotoc	Pontotoc	" 30 " 2
Attala	Liberty Chapel	Nov. 1— 3
Panola	Panola	" 6— 8
Jefferson	Rodney	" 6— 9
Scott	Hillsboro	" 7— 8
Pike	Summit	" 7— 9
Chocktaw	Bankston	" 9—10
Claiborne	Port Gibson	" 13—16

MISSOURI.

Newark	Newark	Sept. 3— 7
Saline	Miami	" 4— 8
Jackson	Independence City	" 4— 9
Gasconade	Hermann	" 5— 6
Clinton	Plattsburg	" 11—14
Platte	Platte City	" 25—30
Cass	Pleasant Hill	" 26—29
Lafayette	Lexington	Oct. 2— 6
Clay	Liberty	" 2— 7
Osage	Linn	" 4— 5
Franklin	Meadville	" 11—13

MINNESOTA.

Winona,	Winona	Sept. 19—21

NEW-HAMPSHIRE.

Carroll	Ossipee	Sept. 19—20
Grafton	Littleton	" 19—20
Rockingham	Portsmouth	" 19—20
Hillsboro	Weare	" 20—21
Cheshire	Keene	" 25—26
Merrimack	Concord	" 26—28
Merrimack River	Nashua	Oct. 10—11

NEW-JERSEY.

Somerset	Somerville	Sept. 11—13
Warren	Belvidere	" 11—14
Sussex	Newton	Oct. 2— 5

NEW-YORK.

Saratoga	Saratoga Springs	Sept. 4— 7
Tompkins	Ithaca	" 5— 7
Clinton	Plattsburgh	" 10—11
Cayuga South	Sherwood's Corners	" 11—12
Tompkins (Union)	Trumansburg	" 11—13
Chautauqua	Jamestown	" 11—13
Broome	Lisle Village	" 11—13
Franklin	Malono	" 11—14
Wayne	Clyde	" 12—
Jefferson (Union)	Adams	" 12—13
Chenango	Afton	" 12—12
Cayuga	Auburn	" 12—14
Genesee Valley	Nunda	" 13—15
Genesee	Batavia	" 18—19
Oswego	Mexico	" 18—20
Albany	Albany	" 18—21
Queens	Jamaica	" 19
Jefferson	Watertown	" 19—20
Wyoming	Warsaw	" 19—20
Rensselaer	Lansingburgh	" 19—28
Cortland	Virgil	" 20—22
Oneida	Utica	" 25—26
Susquehannah Valley	Unadilla	" 25—26
Westchester	Mt. Kisco(New Castle)	" 25—27
Putnam	Brewster's	" 25—27
Cattaraugus	Little Valley	" 25—27
Lewis	Turin	" 25—27
Delaware	Hobart	" 26—27
Madison	Brookfield	" 26—27
Essex	Elizabeth	" 26—27
Otsego	Cooperstown	" 26—27
Chautauqua (Union)	Fredonia	" 26—28
Tioga	Owego	" 26—28
Onondaga	Syracuse	" 26—28
Livingston	Geneseo	" 26—28
Monroe	Rochester	" 26—28
Ontario	Canandaigua	" 26—28
St. Lawrence	Canton	" 26—28
Tonawanda Valley	Attica	" 26—27
Ulster	Kingston	" 26—28
Seneca	Waterloo	" 26—28
Niagara	Lockport	" 26—29
St. Lawrence (International)	Ogdensburg	" 26—29
Monroe (Union)	Brockport	Oct. 2— 3
Wayne (Union)	Palmyra	" 2— 4
Oxford	Oxford	" 2— 4
Chenango	Coventry	" 3— 4

TOWN FAIRS.

Clymer	Clymer	Sept. 5— 6
Busti Union	Busti	" 6— 7
Smithville	Smithville	" 6— 7
Ridgeway and Shelby	Medina	" 12—14
China	Arcade	" 13—14
Gouveneur	Gouveneur	" 13—14
Vienna	North Bay	" 18—19
Seneca Falls	Seneca Falls	" 18—20
Skaneatcles	Skaneateles	" 25—
Brookfield	Clarkville	" 26—27
Sherburne	Sherburne	" 26—28
Columbus	Columbus	Oct. 2— 4
Camden	Camden	" 3— 4

OHIO.

Brown	Georgetown	Sept. 4— 7
Fayette	Washington	" 5— 7
Portage	Ravenna	" 5— 7
Warren	Lebanon	" 5— 7
Gallia	Gallipolis	" 11—12
Ashtabula	Jefferson	" 11—13
Clermont	Bantam	" 11—14
Trumbull	Warren	" 11—14
Pickaway	Circleville	" 12—14
Medina	Medina	" 18—20
Clinton	Wilmington	" 18—20
Brown (Independent)	Ripley	" 18—21
Clermont	Olive Branch	" 18—21
Greene	Xenia	" 18—21
Muskingum	Zanesville	" 18—21
Preble	Eaton	" 18—21
Miami	Piqua	" 18—21
Highland	Hillsboro	" 18—21
Vinton	McArthur	" 19—20
Defiance	Defiance	" 19—21
Delaware	Delaware	" 19—21
Knox	Mount Vernon	" 19—21
Madison	London	" 19—21
Adams	West Union	" 25—28
Belmont	St. Clairsville	" 25—28
Geauga	Burton	" 25—28
Columbiana	New Lisbon	" 26—28
Jackson	Jackson	" 26—28
Tuscarawas	New Philadelphia	" 26—28
Union	Marysville	" 26—28
Guernsey	Cambridge	" 27—28
Greene (Union)	Jamestown	" 29—31
Clark	Springfield	Oct. 1— 5
Wood	Perrysburg	" 2— 3
Carroll	Carrollton	" 2— 4
Mahoning	Canfield	" 2— 4
Sandusky	Fremont	" 2— 4
Summit	Akron	" 2— 4
Cuyahoga	Cleveland	" 2— 5
Richland	Mansfield	" 2— 5
Logan	Bellefontaine	" 2— 5
Darke	Greenville	" 2— 5
Lucas	Toledo	" 3— 5
Crawford	Bucyrus	" 3— 5
Harrison	Cadiz	" 3— 5
Geauga (free)	Claridon	" 3— 5
Hocking	Logan	" 3— 5
Lake	Painesville	" 3— 5
Lawrence	Ironton	" 3— 5
Licking	Newark	" 3— 5
Lorain	Elyria	" 3— 5
Marion	Marion	" 3— 5
Morgan	McConnellsville	" 3— 5
Ottawa	Port Clinton	" 3— 5
Putnam	Ottawa	" 3— 5
Seneca	Tiffin	" 3— 5
Washington	Marietta	" 3— 5
Wayne	Wooster	" 3— 5
Williams	Bryan	" 3— 5
Butler	Hamilton	" 3— 6
Hancock	Findlay	" 4— 6
Stark	Canton	" 4— 6
Champaign	Urbana	" 9—12
Coshocton	Coshocton	" 10—11
Morrow	Mount Gilead	" 10—12
Wyandot	Upper Sandusky	" 10—12
Fairfield	Lancaster	" 10—12
Ashland	Ashland	" 11—12
Paulding	Junction	" 25—26

TOWN AND INDEPENDENT FAIRS.

Horse Fair	Cleveland	Sept.	5— 7
Union Society	Cuyahoga Falls	"	5— 7
Wellington	(Lorain Co)	"	10—12
Wheeling Island	Virginia	"	11—13
Twinsburgh	(Summit Co)	"	12—13
Salem	(Columbiana Co)	"	12—14
Madison	(Franklin Co)	"	18—20
Belmont	(Belmont Co)	"	18—20
Alliance	(Alliance Co)	"	20—22
Belleville	(Richland Co)	"	24—26
Hinckley	(Medina Co)	"	25—
Philadelphia	Philadelphia	"	25—28
Plymouth	(Richland Co)	"	26—28
Richfield	(Summit Co)	"	26—28
Conneaut	(Ashtabula Co)	"	27—28
Marlboro	(Stark Co)	"	29—
Orwell	Ashtabula	Oct.	1— 3

PENNSYLVANIA.

Allegheny	Pittsburg	Sept.	4— 7
Philadelphia	Powelton, (W. Phila.)	"	25—28
Berks	Reading	"	25—27
Bucks	Newtown	"	26—27
Highland (Cambria Co)	Johnstown	"	27—29
Lawrence	Newcastle	Oct.	2— 4
Montgomery	Springtown	"	2— 4
Indiana	Indiana	"	3— 5
Crawford	Conneautville	"	3— 5

TENNESSEE.

Marshall	Lewisburg	Sept	11—14
Sumner	Gallatin	"	17—22
Bedford	Shelbyville	"	18—22
Smith	Rome	"	26—29
Putnam	Cookville	Oct.	1— 4
Maury	Columbia	"	1— 6
Warren	McMinnsville	"	9—11
Giles	Pulaski	"	9—12
Shelby	Memphis	"	9—13
Gibson	Trenton	"	10—15

VERMONT.

Addison	Middlebury	Sept.	5— 7
Rutland	Rutland	"	6— 7
Caledonia	St. Johnsbury	"	25—28

WISCONSIN.

Badax	Viroqua	Sept.	10—12
Racine	Union Grove	"	11—13
Wapaca	Weyauwega Village	"	13—14
St. Croix	Hudson	"	18—19
Jackson	Albion	"	18—19
Columbia	Cambria	"	18—20
Winnebago	Oshkosh	"	19—20
Sheboygan	Sheboygan Falls	"	19—20
Waushara	Wautoma	"	26—27
Monroe	Sparta	"	26—27

PROVINCIAL FAIRS.

CANADA WEST.

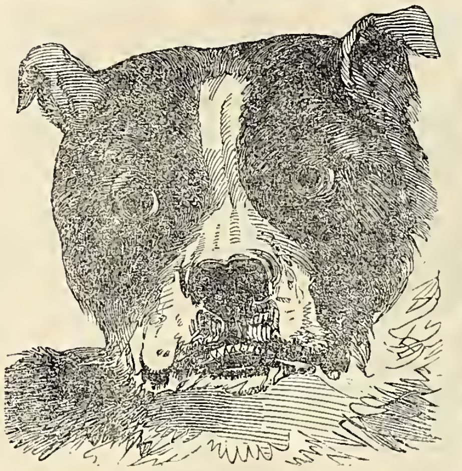
Oxford, (Norwich)	Otterville	Oct.	6—
Wellington	Fergus	"	9—

CANADA EAST.

Stanstead	Magog	Sept.	15—
Broome	Knowlton	"	18—
Shefford	Waterloo	"	19—
La Prairie	St. Constance	"	20—
Huntingdon	Huntingdon	"	25—
Campton	Eaton Corner	"	27—
St. Johns	St. Johns	"	27—
Ottawa	Aylmer	"	27—
Levis	Notre Dame	Oct.	2—
Maskinouge	River du Loupe	"	2—
Mont Calm	St. Ligouri	"	3—
Pontiac	Clarendon Center	"	4—

Another "World's Fair," in 1862—A Hint to Railroad Managers.

Active preparations are already on foot for holding another World's Fair, or International Exhibition, in London, in 1862, in the same place, and on a similar plan with that of 1851. We have before us a subscription list to a guaranty fund which, up to the 1st of August amounted to £350,000, or about 1¾ million dollars! Prince Albert, the Royal Consort, heads the list with £10,000 ($50,000). The several London Railways subscribe £80,000 or $400,000! This is a hint to the Managers of American Railways. While some of them have always acted upon the true policy of fostering agricultural exhibitions, by liberal contributions, by carrying and returning stock and other articles free, and by the issue of excursion tickets, there are others who act upon the "penny-wise pound-foolish" plan of withholding all aid or encouragement. There are few cases where a railroad, by contributing a few hundred dollars to aid in getting up a good agricultural show at any point along its line, would not receive back ten-fold. Some railroad managers are always wide awake to all such enterprises and the result is seen in the healthy financial condition of the roads under their care. Others turn the cold shoulder to anything out of the regular routine, and the share, or more frequently the *bond* holders take the consequences. We commend to such the example of the London railroads. We have in mind one railroad where the superintendent and the conductors even, are the foremost actors in every exhibition, excursion, etc, and the result is, the stock is so valuable that none of it can be bought in market.



"Dog-o-Phobia."

A subscriber, the owner of a big dog we suppose, don't like our articles against the canine species, and wants to know if we "havn't got an attack of the dog-o-phobia." To which it is answered: *we have*, and you would have it too, had your experience been like our own. Here is an item or two from that experience: We yet carry abundant scars of an unmerciful "chewing up" received from a dog that attacked us when a boy, quietly walking along the public street, without so much as a knowledge of the animal's existence until the attack. We make frequent sacrifice to these scars by furnishing free doses of strichnine or lead to dogs that wander upon our premises. Another item: one of the first attempts to introduce an improved breed of sheep into the Western country was made on our paternal homestead, and it was done at a large cost. The experiment was just beginning to be successful, when one Sabbath morning while the family were at breakfast, *twenty seven* of the sheep were murdered by two strolling dogs. We followed the dogs in a round-a-bout wild goose chase of 11 miles on a cold Winter day, and finally lost track of them in the drifting snow. We are looking for the owners yet. This single case is but a tithe of what we have lost by sheep-killing dogs. On one occasion we had to pay $10 for killing a dog found feeding at day-break, a mile from home, on 12 lambs slaughtered by somebody's dog on the preceding night. The dog-loving referees decided that the dog we had killed, was proved to have a good character previously, and that it was nothing against his credit to be found eating carrion—any good dog would do that. It cost us the then price of six sheep to pay for that dog. Will anybody point us to a single neighborhood where some one has not suffered from dogs? Will any one deny our previous statement that so profitable a branch of agricultural enterprise as sheep raising, would receive double the attention it now does, if dogs were out of the way? We *have* got the dog-o-phobia. See what Governor Randall of Wisconsin says on page 271.

P.S.—A SIXTEEN-HUNDRED-DOLLAR DOG.—Since penning the above we have heard from Paterson, N. J., to this effect: A single dog bit a large number of cattle in the vicinity of the Two Bridges, near that city, of which *twenty one* have been attacked with hydrophobia, and *twenty* of these are already dead. Besides these, a number of others are supposed to have been bitten by the same dog. Seven belonging to Cornelius Van Ness, and three belonging to widow Stuart, are known to have been bitten. The owners of these ten are looking for the breaking out of the dreaded disease. The positive loss already experienced from this one dog is estimated at not less than *sixteen hundred dollars!* Will the Census man please send us an accurate value-list of all the dogs in Paterson? We *have* got the "dog-o-phobia," and the disease is getting worse.

Pass Brother Harris Along.

Satan rebuking sin!—"Prof." James J. Mapes "L. L. D.," talking of Joseph Harris, the worthy Editor of the Genesee Farmer, as "beneath contempt"! and calling him "unscrupulous," "malicious," untruthful," etc.!——We have no disposition to intermeddle with Mr. Mapes' personal quarrels, but when he publishes Mr. Harris as a man *without character among his editorial brethren*, because he has not spoken in the highest terms of Mr. Mapes' pet "super-phosphate,"—after he had taken some special pains to personally investigate the process of manufacture—we join with our cotemporaries, the *N. Y. Observer*, *Connecticut Homestead*, *Boston Cultivator*, *Country Gentleman*, etc., in assigning Mr. Harris a high character among his "editorial brethren"—a character which it will take the self-styled "Prof," "L.L.D." a long course of upright conduct to attain. And such, we think, will be the verdict of 39 out of the 40 Agricultural papers in the country—or at least of so many of the 39 as are acquainted with the past editorial career of both Mr. Harris *and* Mr. Mapes.

Cutting Corn Stalks—Again.

Some farmers still adhere to the old practice of topping their corn as soon as the ears are glazed. They suppose that the corn ripens better by exposure to the sun, and that the tops so cut, make better fodder. We advocate the cutting up the entire hill as soon as the kernels are well glazed. This method saves labor, yields as much and as good grain, gives the farmer more time to secure his crop, and the stalks make better fodder.

It is much easier to cut up the stalks when green, than when ripe and dry. A workman can grasp a whole hill with one hand and arm, and cut it up with the other at a single blow. But in topping, each stalk must be cut separately, and then in the final cutting up of the hills when dry, the labor is much greater.

At the North, frosts visit us soon after the kernels are glazed, if not before; and after the leaves have been once seared by frost, very little good can come to the ears from the ascending sap. Now, if the entire stalks are cut up just before frosts come, and bound together in large loose bundles, most of the leaves will remain un hurt by frost, and will continue to send down their accumulated food to the grain. So that probably the ears become fully as well developed as they would if the stalks had been allowed to stand a few days longer uncut. Besides, it should be remembered that all standing corn wastes by being broken down, and eaten by poultry, birds, etc.

Again: corn thus early cut up, can be housed in better season and with less labor than if left standing in the field. It is less apt to become moldy, or to be soaked by water. If the farmer wishes to prepare his corn-field for a fall crop—say of wheat or rye—it can be easier and sooner cleaned by this method than by the other.

Then, as to the fodder. It is very slow work to top the stalks one by one, then to gather up and bind and carry them by hand to the wagon or cart at the outside of the cornfield. And if they are left on the ground until the crop is gathered, they are worth no more for fodder than the butts themselves. Whereas, if gathered as we recommend, and cured under cover or on poles in an airy loft, they will remain succulent and sweet all winter. It must be a very fastidious cow that will not eat up every inch of such stalks, if they are cut up with a straw-cutter and properly fed out. So, on a review of our reasons, we shall still adhere to the practice we have recommended.

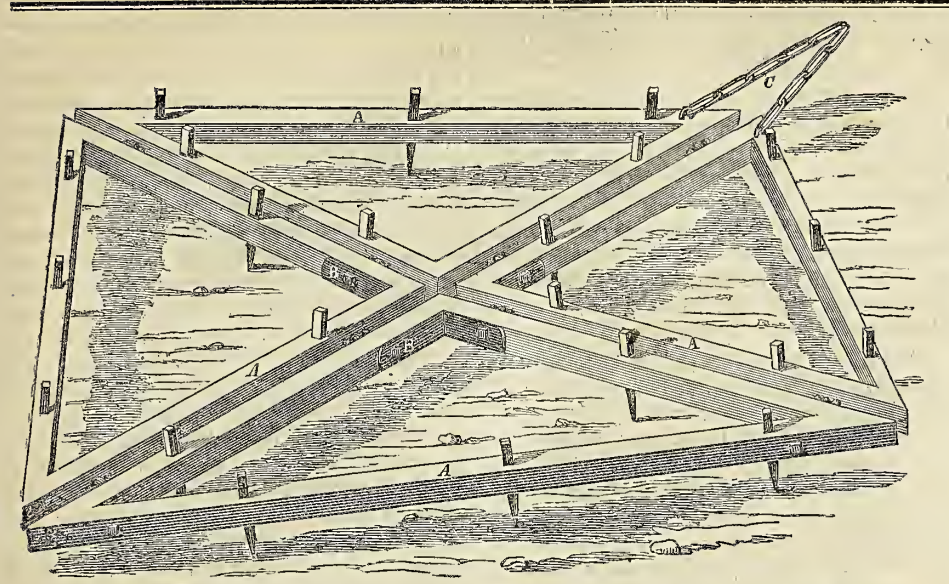
* * *

How to Harvest Broom Corn.

In a former number of the *Agriculturist* we published an article on the Dwarf Broom Corn, from a correspondent who considered the difficulty of harvesting the stalks, a great objection to its culture. It is essential that the stalk be cut at or just above the highest joint, that being the only part used for manufacture, and the leaf so envelopes the stem that the joint can not be seen, which renders it difficult to cut at the right place. If cut below the joint, the leaves must afterwards be stripped off by hand, which is a tedious process. Mr. E. B. Good, who has cultivated this variety several years past, gives the following directions, which may be of service to those who received the premium seeds from this office the present season, and to others experimenting with the article.

The brush should be harvested as soon as the seed is hardened, and before severe frosts come on. In gathering, grasp the brush in one hand, and the top leaf in the other, and give a rapid jerk, separating the hands, right and left, which will break off the stalk at the first joint, leaving four to six inches attached to the brush. This makes it necessary for the manufacturers to tie the brooms very close to the brush, but, Mr. G. says, Dwarf Broom Corn harvested in this manner, is worked up by the trade in his neighborhood with equal facility to that with longer stalks.

In all respects except that noted above, the stalks should be treated exactly like the old fashioned tall-growing kind.



Russell's Flexible Harrow.

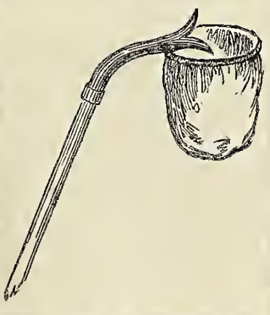
Every cultivator knows that in raising grain, very much depends upon reducing the seed bed to a fine tilth, and that thorough harrowing is essential, particularly in tenacious clayey soils. When land is level and free from stones or other obstructions, this is easily accomplished with an implement of the ordinary construction, but thousands of acres devoted to grain are uneven and rough with stumps, roots, and stones. Many forms of the harrow have been devised to be used on such fields, the object being to make it flexible, to adapt itself to the inequalites presented so as to work the whole surface.

The most recent we have seen, is that invented by Mr. John Russell, illustrated above. The figure represents a square harrow made by joining four smaller triangular ones, *A*, *A*, *A*, *A*. These are hinged together with iron at *B*, *B*, and near the outer corners as shown in the cut, and are allowed to play freely to conform to the varying surface.

The implement is drawn by the chain, *C*, attached to the two corners as seen in the figure, by which arrangement it takes a wedge form. A shield of iron, not shown in the cut, is placed over the opening behind the draft chain, which turns aside the weeds and stubble, and prevents their clogging around the hinge. It is simple, and looks as if well adapted for its object. We have not seen it in operation, and cannot state the price. The proprietor will probably make it known by advertisement in the appropriate columns.

* * *

Implement for Picking Fruit.

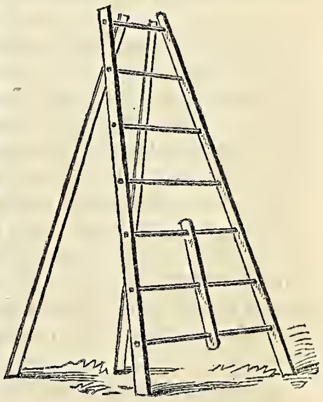


The old fashioned method of gathering fruit by sending the most active youths up into the tree to rattle them down by vigorous shaking, might answer, perhaps, when apples formed the bulk of the crop and they were mostly fit only to manufacture into cider. The bruises and gashes received were part of the process of making the pulp fit for the press. But an amateur fruit grower would no sooner permit such rudeness with his Bartletts, Virgalieus or other choice fruits, than the good housewife would give her china tea cups for play things to the children. It is no small labor to pick such fruit by hand, particularly the specimens hanging at the ends of the limbs, which are often the finest, and various implements have been devised to facilitate the work. The fruit ladder described in the following article is very convenient, but this must be often moved about from tree to tree and there is also the trouble of mounting the ladder to reach the higher branches. The device illustrated at the head of this article is one of the handiest contrivances we have seen. It consists of a small cloth bag, sowed to a hoop of stout iron wire, which is fastened to a pole long enough to reach the fruit. Upon the end of the pole, and immediately over the bag, is an iron prong, having an angle formed as shown in the cut. The edges that meet to form the angle may be made sharp, to cut the stem of the fruit. This, however, is hardly desirable, as there might be danger of wounding the shoots of the tree. The stem is easily broken by taking it between the prongs and giving it a gentle twist. The whole picking apparatus may be fastened to an iron socket, which will admit poles of different lengths, according to the size of the trees. The manner of using this instrument is obvious. The operator breaks or twists off three or four specimens, lowers and empties the bag and proceeds with the work. This apparatus can be made at a trifling cost by any blacksmith, and it will soon pay for itself, where there is choice fruit to gather. All fruit intended for keeping any length of time should be picked carefully, as every bruise will very soon induce decay.

* * *

Convenient Fruit Ladder.

The figure below shows the pattern of a ladder, which will be found more convenient for gathering fruit, than the ordinary kind. It may be made of any desired length, say from 8 to 20 feet. The lower end is spread wide to give it a firm support. Several of the bottom rounds are connected by a center piece, else the weight upon a single long round might break it.



The upper round is a roller, which turns as the two upright braces are moved towards or from the bottom of the ladder. These upright supports are bolted loosely to the roller, which admits of their lower ends being brought near each other, or widely spread, to afford a broad base. When not in use, or when carried about, the props are tied to the side-pieces or rounds of the ladder, and the whole is so light, as to be easily moved. We have seen neat painted ones of different lengths on sale at the agricultural stores, at 25 cents per foot in length, but any person, handy with a saw and an auger, can easily make one for himself. The one here sketched, is 8 feet in hight, 2½ feet wide at the bottom, and 1 foot at the top, with pine side pieces, 2½ inches wide by 1 inch thick. The uprights are of the same material, 1½ inches by 1 inch. The rounds are of oak, and the whole is very light. Larger ones should have hard wood sides and uprights.

A Talk on Draining.

To the Editor of the American Agriculturist :

Much is said, considerable done, and doubtless more thought at the present day, about underdraining. But after all, every Yankee, before going into the "operation" asks himself, and perhaps half the neighborhood besides, "will it pay?" Where land is worth from one to two hundred dollars per acre, and hay sells at eighteen to twenty-five dollars per tun, and other crops in proportion, of course the question admits of but one answer.

(1) But in this region where good land can be had for $25 to $30 per acre, hay averaging $5 to $7 per tun, corn 2 to 3 shillings per bushel, (ears,) wheat $1, etc., can a farmer afford to drain his land at the cost of $1 or upwards per rod?

(2) We have on our farm a meadow of about 20 acres, (mostly peat, or muck,) which bears a very large burden of grass of very good quality; much of it timothy, clover, and red-top. The land is comparatively new, and somewhat uneven; most of it sufficiently hard to hold a team; much, perhaps most of it, could be plowed. Now the question is whether, under the circumstances, it would be a paying business to put in the drain tiles? They will cost from 20 to 50 cents per rod, according to size.

(3) If tiles are used, what size will be most advantageous? How deep should they be laid? and how far apart?

(4) I see *Prof.* Mapes recommends laying the tiles five feet below the surface. Is not this altogether too deep in a heavy clay soil?

(5) What would you think of making the drain of boards, sawed one inch in thickness and six inches in width, nailing the edges in the form of an eaves trough, and placing the open side down in this form, Λ? I have tried it on a small scale, where I wished to take off the surface water; placing them 6 or 8 inches under ground, and find they answer a good purpose; but whether it would pay where there is an outlay of 50 cents, more or less, per rod, for digging and filling up the ditch, is the question. I have thought if the boards were made of chestnut, red beech, or some timber that would last a long time under ground it might pay. I would like the opinion of some who have had experience in the business. If you can give any further information in the *American Agriculturist* on this subject it will be most thankfully received.

Geauga Co., O. D. M. Allen.

In reply to the above questions we answer:

1. Where produce commands a higher price, draining will of course yield a greater per cent on the investment, as the first cost of laying the tiles, and the increased returns per acre, will be about equal in both cases. Still, a few figures will demonstrate that it will pay to drain lands needing it, (which most soils do,) even at the prices for produce named above. Put the cost of this improvement at $20 per acre, (a fair figure,) and reckon the increased return at one tun of hay, or its equivalent, which is a safe calculation, even at the low estimate of $7 per tun, there is a return of 35 per cent for the money expended; for, with the exception of harvesting the increased amount, the cost of cultivation is no greater than before. We think money bringing in even 20 per cent pays well.

2. We can not answer as to this particular field. If it be a good natural meadow, and yields well year by year, it may be as well to leave it for this purpose, and not bring it under the plow at present. Should it fail, then drain, plow, and reclaim it.

3. The article on page 198, this volume, (July No.,) contains the information asked for.

4. You will see many ideas emanating from that source, which no other man entertains—in this instance he has "progressed" too far down for all practical purposes. From 3 to 4 feet is sufficient.

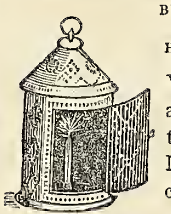
5. Such drains are of service for a while, and certainly far better than none, but where tiles can be procured, they are every way preferable. A job of draining with tiles, once well done, is finished for an almost indefinite period.

We shall continue from time to time to give information, suggestions, and illustrations, on this most important subject, and shall be pleased to hear from those who have experimented in the matter. In describing what has been done, the kind of soil, condition before draining, cost of work, results of the operation, and other pertinent facts should be plainly stated. We are confident that if a tenth part of those who have made a trial in draining would give their experience, the testimony would set thousands of farmers to work digging to find out the capacity of the under side of their farms.

Blinks from a Lantern......XXI.

BY DIOGENES REDIVIVUS.

HOW TO GET CHEAP HAY.



With hay selling from the field at fifteen to twenty dollars a tun through a large part of New-England, the question of cheap hay becomes a matter of absorbing interest. All through the North where cattle are kept up through the Winter, the hay crop is of the first importance. Indeed, taking the whole country into the account, the single item of grass is far more valuable than any other product of our soil. It far outstrips corn, cotton, and wheat, which generally attract more attention because they are more generally sold, affecting the commercial exchanges of the country. But the lowly grasses that our cattle graze during the Summer, and which, dried, form their principal food in Winter, are more important to the prosperity of the country than any other crop. This crop in the form of dried grass was estimated at about 14,000,000 of tuns at the last census, and the pasturage is quite as abundant and valuable. The increased production in the last ten years has been very great, both from the new lands brought under cultivation, and from the better cultivation of the old. Reckoning hay at ten dollars a tun, and putting the pasturage at equal value with hay, the whole crop of the country can not be worth less than 350 millions of dollars. If by any cheap process we could add ten per cent to the production of grass, it would be an addition of thirty five millions to the wealth of the country.

With all this enormous aggregate, the processes of growing grass are very defective in all parts of the country. Not one farmer in ten resorts to the most economical methods. My opportunities for observation in my recent lantern adventures, abundantly confirm me in this belief. The difference between the crops of good and poor farmers, or between a wise and bad husbandry is more than three hundred per cent.

The dearest process of getting hay is that of a neighbor of my friend Higgins. He lives on a fifty acre farm, and has been there for a score of years or more. Roberts belongs to the old school of farmers, and nothing is orthodox with him that is not done in the good old way. Grass he holds to be a "nateral growth" of the soil, and where a thing comes naturally, the more you do for it, the worse it is. He has some twenty acres in mowing, and the gross product of the whole does not exceed fifteen tuns. The yield per acre is always from a half tun to one tun per acre. This thin half nourished grass, he honestly believes is much more nutritious than that from a well cultivated meadow, though he can see the difference between half starved and well fatted beef, and never fails to prefer the latter. He often declares that he does not want land that will yield four tuns of hay to the acre. He does not see how cattle can eat such stuff, and doubts if it does them any good. Higgins' cattle look sleek to be sure, but he feeds with meal, he guesses, and it must be the meal that makes the flesh. Roberts believes in selling hay, and nothing is more common than to see him start off to the city with a load, though he have to sell a cow during the Winter for want of fodder to keep her through. His oxen are never able to draw a full load, for lack of muscle on their ribs. His rotation is corn two years with ten loads of well sun dried and bleached barn yard manure to the acre, oats one year, without any manure, and then grass several years, until it will not produce enough to pay for mowing. The first year after stocking down, he cuts a tun to the acre, and if the season is uncommonly wet, he gets a tun and a quarter. His yield of corn is about twenty five bushels to the acre, which satisfies his ambition as well as ninety does the man who takes the premium at the County fair. In good grass years he gets a profit of four or five dollars an acre.

Right across the way from Roberts, lives young Dan Baker, who has been on his 80 acre farm only five years, and has already got the most of it into good heart. He has about the same quantity of land in meadow that Roberts has, but he gets sixty tuns instead of fifteen, averaging three tuns to the acre. Roberts, of course, says that "he dont want any such coarse stuff for his cattle to eat" but some of your readers will have a curiosity to know how he does it. His rotation is two years in corn, one in Spring wheat, with which he stocks down, then in grass four or five years until he gets ready to plow again. He does not believe in any thing less than three tuns of hay to the acre, and has an idea that land may be kept perpetually in grass without any falling off. When he takes up a piece of sward he puts on fifty loads of good stable manure or compost to the acre, and more if he has it. He usually gets from seventy to eighty bushels of corn to the acre. To do this, he plows twelve inches deep, while Roberts plows only five. He stocks his ground with a mixture of grasses, herds, clover, red top, etc , and finds that, with deep plowing, they get a much stronger hold, and last longer. He has great faith in top dressing, and makes compost every year for the purpose of spreading upon mowing land. On level land he spreads this in the Fall and Winter. On hill sides he spreads it in May, after the grass is well started, so that the grass may hold the manure, and prevent it from washing. He makes great use of muck, of which he has a large deposit within a hundred rods of his barn. Indeed he built his barn with reference to the muck mine, so that he could get it at small cost for carting. He claims that he can make a cord of good compost for fifty cents, and spread it upon the mowing for fifty more, and that five cords spread upon an acre, will show its effects for three years or more, and will make a difference in the yield of three tuns of hay. In other words he gets three tuns of hay for five dollars, taking it as it stands in the field. Dan Baker takes the papers and is a close calculator, and I think he is about right.

By this thorough mode of cultivation and high manuring, he gets his hay very cheap. The corn and wheat crops not only pay for the manure and labor but leave a handsome profit, so that the land has no charges against it when it comes into mowing. He gets three tuns of hay worth, this year, thirty six dollars standing. Besides this he gets eight weeks' pasturage for a cow, worth four dollars more, or forty dollars income from an acre of land above all expenses. Dan Baker never sells hay, says he would just as soon sell his Morgan mare, or his South Down buck. If there is any profit in the use of hay, and he guesses there must be, he wants to make it. So he buys stock enough every year to eat up all the hay and grain he raises upon the farm. With these he makes manure, more manure, most manure, every year. This is the Alpha and Omega of cheap hay, and of all profitable farming. Feed the soil and the blades of grass will spring up, not only two to one, but sixty and a hundred fold. Light increases and I am beginning to see in dim outline a farmer.

Tim Bunker on Irrigation and Invisible Toll Gates.

"What next?" exclaimed my neighbor Tucker one morning, as he poked his head over the wall of the lot where the horse pond used to be, and which is now known in all Hookertown, as the Horse Pond lot.

"What are you turnin up that furrow for?" asked Jones with his mouth agape, as if he saw an elephant.

"You ain't a gwine to plow this field, be you Squire?" asked Seth Twigs, as he blew an extra long whiff out of his mouth, and leaned his elbow on the wall.

"Plow it, you fool!" exclaimed Jake Frink, "that are field cut four tun of hay to the acre this season, and you don't think Tim Bunker is gwine to take up such a sod as that do you?

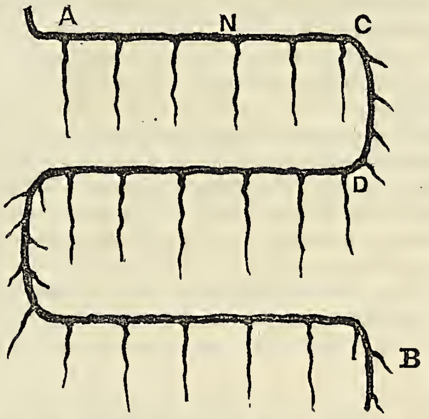
"'Tarnally tinkering with the land," added uncle Jotham Sparrowgrass, as he looked in astonishment at a new adventure upon a piece of land, that he thought was finished.

"You don't expect to get any more grass off of this lot than you cut this year do you?" inquired Mr. Spooner as he came to join that portion of his flock who keep a sharp look out on all my movements.

The Horse Pond lot is admitted to be a great success, and Jake Frink grits his teeth every time he goes by it, and wonders he was such a fool as to sell it, though it would have laid there unimproved to this day, if he had kept it. A part of it I have in sugar beets and mangolds, and though I have seen some beets in my day, I must say these are the beaters of all that tribe of plants. You see I fell in with a lot of old lime plaster from a house they took down in the village this spring, and carted on perhaps a dozen loads. The lime was just what the soil needed to decompose its excess of vegetable matter, and judging from the growth of these beets, they have had about as much plant-food as they could take care of. They have three months to grow yet, and they already cover the ground though they are planted two feet apart. The crop will not be short of two thousand bushels to the acre.

But the larger part of the lot has been in grass, and according to the estimate of my neighbors, the yield was four tuns to the acre, though I guess they overstate the matter a little. It was tall herds-grass and lodged in spots, but it takes a great deal of hay to make four tuns to the acre. But good as it was, I am not quite satisfied with it. You know it is not in human nature to let well enough alone, or to think that we are on top of the ladder, while there is a single round above us.

I was just laying out the ground for watering it, when my neighbors gave me a call yesterday. You see the land slopes away from the road, and water can be run all over it by making shallow channels upon the surface with a plow, and mending them a little with the hoe and spade. I have a first rate chance to turn water on, and as the ground is now all drained, I claim that the more water on top, the better, as long as it can get out at the bottom.



Almost all water has more or less sediment in it, even when it seems to be clear, and the land is just like a strainer to take all this floating matter out. There is a good deal of nourishment for plants in this sediment. The soup is rather thin I admit, but I suppose some things may suit plants, that would be rather spare diet for man or beast. When I get my channels properly constructed, I can irrigate this lot from two sources, the wash of the road, and a brook that I can turn from its course at a cost of not over twenty dollars. You see the lot lies right in a hollow between my house and Jake Frink's, and can now be made to catch all the water from the two hills, a distance of at least a mile, which used to go into the pond before it was drained. The wash of a road is good any where, I suppose partly from the manure that drops from passing animals, and partly from the soil which is ground up very fine by the continual tramping of iron shod feet, and the crushing of wheels. I have noticed that wherever any of this dirt is run on to a mowing field, even where there is hardly a trace of manure, it makes the grass much stouter, and you will see the effects of it for several rods from the fence. I have sometimes thought it would pay to have a machine for grinding up soil very fine for top dressing. At any rate, there can be no doubt that all the wash of roads ought to be saved wherever it can be turned on to grass land.

In the roads that lead into villages and cities this wash is particularly valuable, because there is more travel to grind up the soil, and more manure dropped. Hookertown is a place of considerable trade, and I suppose on an average there are fifty carriages and teams that go by this lot every day. I calculate to make them all pay toll, and contribute to the growth of my grass without knowing it. Suppose I get from each passing team only five mills, this amounts to twenty five cents a day, or over ninety dollars a year. I think the wash that comes into this hollow, when spread over five acres, will make more than ninety dollars difference in the yield of the hay. Every farmer who owns a lot similarly located, can erect an invisible toll gate, and collect the tolls without robbing his neighbors.

The water from the brook I can turn on, in dry times in the Fall or Summer, after the hay is taken off. This brook comes from a swamp covered with timber and brush, principally maple and huckleberry and other hard woods, and every Fall brings down a great quantity of leaves and vegetable matter. It also flows through meadows and cultivated fields, and after heavy rains carries a good deal of mud and sediment. This I think can not fail to benefit vegetation, though it is not so rich as the road wash.

The arrangement of the channels is a matter of considerable importance. It is found from experiment that the grass gets all the more valuable parts of the water and sediment in running six or eight rods, so that the main channels should be about that distance apart over the whole field. If the lot lies like mine in the form of a parallelogram, sloping to the south, the channels may be arranged as in the cut. The road runs parallel with the north side of the lot. The water comes in through the wall at A, and follows the main channel until it discharges at B. This channel is made about eighteen inches broad at the top, and about a foot deep. It is kept nearly level where it runs east and west, so that small notches in the brim will pass the water off in nearly equal streams. These small streams are partly absorbed by the soil, in running eight rods to the channel below, where they are caught and mingled with the muddy water again, and again passed off through small cuts in the brim, and so on until the whole field is irrigated. The fall is about two feet in the eight rods, but the channels could be easily worked with much more fall, as the water would only run a little faster from C to D and in the parallel courses.

"Irritation of the land!" exclaimed Kier Frink as he looked out of his coal cart where he has stopped to hear what was said by the company. "What does he mean by that? I never heern of that even in the Whiteoaks, where they irritate almost every thing from cats up to old hosses."

"He is gwine to turn a brook on here and git six tun of hay to the acre," answered Tucker.

"If he can," added Jones.

"And blame him, he'll du it neow ye see, for he's a master hand to carry his pint," said Seth Twigs.

"Neow du tell," responded Kier, hitting his horse a smart lick, "Tim Bunker waterin a swamp! git up old hoss, this aint a safe place for yew."

And the old coal cart vanished up the hill as if the driver had seen a ghost. But I am not quite crazy yet, though some of my neighbors think I am leaning that way. I shall keep you posted on "the irritation of the soil."

Yours to command,

Hookertown, Ct., Aug. 1860.] TIMOTHY BUNKER, Esq.

PROGRESSIVE BEES.—On the 23d of July one of my hives sent out its first swarm, which was properly cared for, and appears to be doing well, and nothing occurred to call particular attention to the old hive until the evening of the 26th, when to my surprise the shrill notes of the young aspirants were very clearly and distinctly heard from three different parts of the hive, each having a peculiarity of sound; and making the impression on my own mind that there were three queens within. Well, sure enough, on the 27th (only 4 days after the 1st) another swarm issued from the same hive. It will be gratifying to me and perhaps useful to others if some one of your correspondents of long experience will give us information on this state of things. B.

Essex Co., N. J.

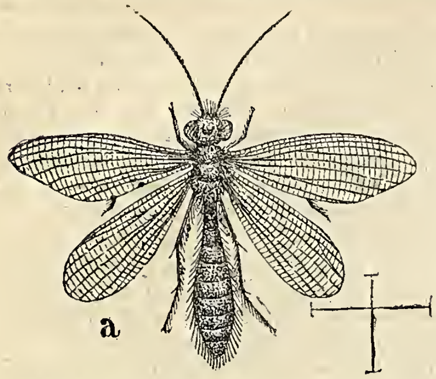


Fig. 1—Golden Eyed Fly of the Apple Blight. (*Chrysopa Eriosoma*), magnified. The cross lines on the right show the natural size.

Microscopic Views of the Insect World. V.

BY MRS. CHARLOTTE TAYLOR.

Chrysopa Eriosoma.

THE GOLDEN EYED FLY OF THE APPLE BLIGHT.

Another friend is here introduced to your acquaintance, one whose services render her well worthy of protection and admiration. She shows us beauty on the wing when she passes us in garden or field. The splendid colors of her body scintillate like rays thrown on us from a passing rainbow. Her eyes are composed of bars of gold through which we seem to have a peep at the setting sun with all the purple shades of evening intermingling, and her airy, finely meshed wings, violet, green, or yellow, just as the light falls on them, make a Summer's noon more resplendent by their presence. Nothing can be more varied in beauty and splendor than many insects of this family.

The Chrysopa is a subgenus of the Hemerobii—the Chrysopa Perla of Linnæus being the type in Europe. It may be distinguished from the Hemerobius by the greater brilliancy of color in the wings and body, the comparative freeness of the body from hair, the more brilliant lights when in motion, the irregularity of the veins and nervures on the wings, and lastly by the scientific distinction—the joints of the antennæ, the first having them moniliform (globular) the latter filiform, the joints cylindrical. There are several other subgenera belonging to this family, distinguished by the joints and the position of the antennæ to which I shall return at some future day. Forty two varieties have been named by Dr. Fitch, all belonging, I believe, to the State of New York alone. Those yet to be found in the Eastern, Middle, and Southern States, will present an inexhaustible classification to the future entomologist. No season hitherto has passed with me but several new varieties have been seen, showing to what instruments of Divine bounty we are indebted for crops, fruits, and flowers. The inestimable value of these little creatures can never be comprehended by us, until they are withdrawn or diminished; then, he assured, scarcity, if not positive famine, will be our portion.

The specimen here shown, Fig. 1, is not so brilliant as some of her associates, still it is very bright and showy. In one light it appears a pale green, turned round it becomes purple, again it is almost a red. I felt very desirous to find out by what means these prismatic colors were produced. After many fruitless experiments, I took a hot needle, and singed off the fine hairs on the body, which all this family have ; it then presented between the segments a bright purple, the rings of the segments were bronzed yellowish green, and the hairs were lucid and yellowish. Thus as you turned the insect, the light falling on different portions threw the colors of the body up, and gave their shading to the hair. The tenth segment, (decaton) and the last, (telum) had their rings reddish which added this hue to make up the various colors reflected from this small surface. The wings obtain their shades from the colors of the nervures and veins—the thorax is of a brilliant emerald green, with a number of small yellow hairs over it. The brilliancy of the eyes is caused from the cornea being intersected with bars of various colored pigments, which, varying in density, form between the cornea and the crystalline cylinders an iris or light, rather I may say a uvea or paint like that which we see in our own eyes, allowing the light to pass through according to the position in which it is placed. It is desirable you should remember this dissection, as the process is the same in the shading of all the orders (except the Lepidoptera) only varying in quantity and intensity when alive, but after death it is difficult to get any radiations at all, except where the colors are fixed, as on the wings of beetles, etc.

She deposits her eggs in the same manner as the Hemerobius, Fig. 2. Sometimes there will be clustered three or four together, and attached with threads of gluten ; this is early or very late in the season, when gales are frequent, and you may suppose them attached thus for security.

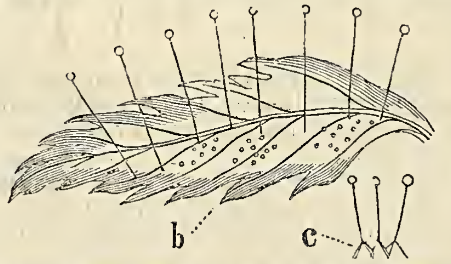


Fig. 2—*b*, Eggs placed on a leaf. *c*, Eggs in a cluster.

This Chrysopa and some others, from their habits, must constitute a subgenus of themselves when more of them are classed. I have myself made them one containing several varieties. They have many differences, the principal is having larvæ which *must feed under cover;* the others are not so constituted. These are found solely among the cottony Aphides or "Blight." As they devour them, they toss their dead skins over on to their backs, in a few moments a larva, clear before, will resemble nothing but a lump of cottony fibers, Fig. 3. If you relieve them of this covering with a straw, they will hasten away from the air until it is renewed. They are covered with short, strong hairs on which these carcasses get pinned until they are eight or ten deep. They feed longer than other larvæ of this family, and you would be amused to watch them in September on the apple trees, wallowing about under such a load of cottony fiber, and the carcasses of their victims. At the last segment or (telum) there is always hanging a long thread of silk, Fig. 4, which answers for a fastening when the winds are high and they are likely to be blown away. Besides, this segment has the power of suction, with which, in storms, it holds on to the branches with more strength than it could do with its legs and mandibles together. On fine days, when the winds are high, you may see them by hundreds, like pigmy witches hanging in this manner from the branches for the purpose of having the wind to relieve them of some of their covering which has become too weighty, as seen at *f*, Fig. 5.

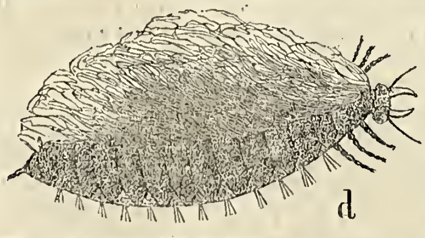


Fig 3—The larva with its covering.

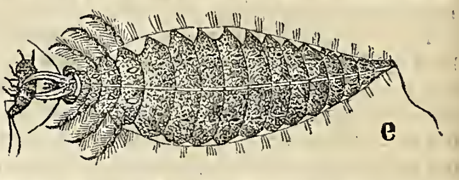


Fig. 4—The naked larva with its thread.

It spins its cocoon in the same manner as the Hemerobius, except that the ends of it, *g*, Fig. 5, and the pupa case, *h*, Fig. 5, are divided or cut off, which, when the fly has emerged, appear like lids attached with hinges of silk, which really is the case : both are coarse on the outside but much better finished within. The pupa is likewise necromorphous, of a faded green hue, all its parts in different sheaths, its antennæ and those resplendent wings being curled and doubled up in a marvelously small space. The coming forth of this large fly from so small a space is a phenomenon of Nature well worthy of study. The difficulty of emerging from the wrapping skin as it becomes an Imago, is more serious with them than with the Hemerobii. They are not so strong either in the larva or perfect state, but are quite as useful. Both of these flies have two generations during the season, remaining in the larva state from two to three weeks. They select more secure places for their cocoons where they remain over the Winter, and you may find many of these coarsely fabricated white hybernacula placed between the fissures of the bark on fruit trees. From that which I have here culled from Nature's vast store house for your amusement and instruction, I trust you will henceforth grant them protection and respect, and not pick them from their snug quarters with a sharp instrument, as I have frequently seen done. Be assured you are giving vast scope and comfort to your enemies by such cruelty—destroying with your own hands the blessings offered to counteract future evil ; for these likewise belong

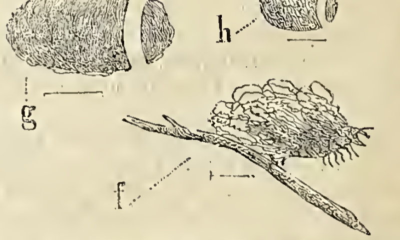


Fig. 5—*g*, The cocoon. *h*, The pupa case. *f*, The larva sustained on a branch by the suction of the tetum

"To the useful, and the beautiful."

ABSCONDING BEES.—Thomas Armstrong, Wyandot Co., O., inquires how he may prevent bees leaving after having been hived. He states that he has lost several stocks in this way. By watching the hives closely a short time, it can be pretty well determined whether they intend to remain. In that case they will at once commence building comb, and a peculiar rubbing sound can be heard upon applying the ear to the side of the hive. If, however, they hang about idle, as if discontented with their new home, they are probably meditating removal. Then close the entrances so that only worker bees can pass, to confine the queen. If this can not be done readily, carry the hive to a dark room and keep them confined two or three days. Give them water and honey with which to commence comb building. It is also recommended to introduce into the hive a piece of comb with unsealed worker brood, which they will seldom leave. They will, however, act very capriciously at times, and leave almost without notice, and from no assignable cause, although every precaution may have been taken to make them comfortable and contented.

To Keep Flies from Wounds.

To the Editor of the American Agriculturist:

I noticed in your notes on farm operations for June, you recommend where lambs have been castrated or hurt, and maggots have bred in the wound, to put on tar or turpentine. It is far better than either, to take the leaves of the common elder, and bruise them, fry them in lard, and apply the mixture. Let it melt and run into the wound, and every maggot will be off as soon as he can find the way out. It would do you good to see them coming out and tumbling off. This will save life, and heal the wound when neither of the others will—and if put on when the wound is fresh, no fly will lay an egg about it.

Hancock Co., Ill. James Jenkins.

For the American Agriculturist.

Pneumonia of Horses—Analogy with the Cattle Disease.

During the Summer and first Fall months of 1832 there was prevalent in this State, a disease, which, from reference to my notes made at the time, I consider in character very like the one now attacking cattle. At that time, many noble animals (horses and mules) died almost without a warning; others lingered with alarming symptoms several days. So great was the general loss, that in consideration for my fellows as well as myself, I concluded to investigate the matter, and resorted to post mortem examinations, as the most certain means of success, in connection with the state of the case previous to death, hoping it would result in finding the true cause, and that a prevention or remedy might be instituted. I accordingly procured the services of several persons, and dissected ten animals, the result of which I will now give as nearly as possible from the minutes made at the time.

My first move was to go immediately to the chest, and examine the lungs, heart and large vessels: to see their exact condition, I dissected immediately after death. The lungs presented a soft flabby appearance, covered with patches of dark spots. Sometimes only one would be involved, at other times both, showing in this latter case, particularly, a high grade of inflammatory action. The left side of the heart was next in order. It was found filled with a mass of congealed serum separated almost entirely from the globules or corpuscles, of a very glutinous nature, and formed into cords, and interwoven into and around the muscles so completely as, in some degree, to prevent their contraction.

The Aorta or main artery, commencing at its attachment with the heart, was next opened as far as possible into its ramifications, and I there found this same ropy, sticky condition of the serum separated from the corpuscles as in the lungs, to such an extent as to block up the passages of the arteries so much, as to defy their muscular action to drive it through them. This serum was so tenacious that I could pull it out of the large arteries in ropes two feet in length, and so tough as not to break in extracting. The lungs, to a certain extent, presented the same appearance, but on account of their reticulated surface it was not so apparent. The liver and spleen were also found in a highly congested state, and showed the same phenomena as the heart and arteries. The bowels were much constipated, and food badly digested. The brain was also laboring under congestion.

From the examination of the different principal organs, I was fully satisfied that in all the cases the lungs were the seat of the affection, and comparing with different authors, I believe it to be equivalent to the Pneumonia of man, the substance of the lung being the principal part affected, and not the pleura. The latter seemed quite *free of any taint, save in its connection with the adjacent parts.*

You may ask if the Blood was in this condition while the animal was living, or did it result after death? In reply to this query, I can answer, I think, satisfactorily. In some cases I bled before death ensued, and upon cooling, found this ropy, sizy matter to be divested entirely of the corpuscles. Once I stood by a horse and saw him fall dead, and immediately I plunged my knife into him, and then, before any change either mechanical or chemical could take place, found the same thickening of the serum. To my mind this was most conclusive.

The symptoms as noted at the time, were, First: The horse will appear to be dull and sluggish, refuse to eat, and take no notice of his fellow, or anything around. His head and ears will begin to droop; mouth and nostrils very hot and dry; after a time the tongue becomes parched and dry. He next begins to stagger and reel about, the eyes sink deeply into the sockets, become of a glassy hue, and would seem to indicate that blindness was about to take place. (Hence it was commonly known as the Blind Staggers.) His mind is so confused that he will run against anything in the way, inclining his head to the side mostly affected, which is generally the left. Not much inclination to lie down, every effort being to keep up, though when seen lying, he was mostly on the affected side. Many times the horse would travel or work well all day, and eat his regular meal, and the next morning show symptoms of the affection. Upon pressing the hand hard over the region of the heart, I found there was great labor, as if the heart were raising a great weight. Upon applying the ear to the side, found but little crepitation. Pulse much depressed; short breathing; sometimes would fall instantly dead. At other times when down would stretch out his head, neck, and legs, and thus remain, without any appearance of life. The limbs and surface are generally cold. He will often remain in this condition for three or four days. The hair often comes off in patches more or less, owing to putrefaction having taken place before death.

As to the origin of this disease I am not prepared to say, but will state what I believe: that it may be brought on by the same causes and run its course the same as the Pneumonia in man, and prevail as an epidemic, but is not really contagious or infectious as they would now have us believe in the cattle disease, but it would doubtless be engendered in others, not so much on account of any particular virus or noxious principle received from the diseased animal, as from the privation of those necessaries for building up a healthy organization and sustaining it under all ordinary circumstances, which is the predisposing cause of most diseases.

The treatment which I resorted to in the Pneumonia of horses, was first to bleed freely, and let the blood stand until it coagulated, and if the serum presented that ropy, sizy appearace, I bled again until the proper consistency was restored and the fever reduced. Drenched with salts to remove all accumulations in the intestines, and then I gave him Nitrate of Potassa, 1 oz., Antimony ½ oz., every six hours, continuously administered as a drench, (as by this time the animal can not eat) until the symptoms abated. Covered all over with a blanket and put under him a large pot filled with hot water, kept up steam to bring on a sweat, and continued it as long as I thought necessary, according to the severity of the case. When the fever was reduced, I shaved off the hair of one or both sides, whichever appeared most affected, over the region of the lungs, and applied spirits turpentine to irritate the skin, rubbed on the blistering ointment (strong) as often as found needful. If the ointment doesn't blister, make use of the hot iron, and keep it sore for two or three days with turpentine. As a general rule no further medical treatment is necessary. Some care should be exercised in convalescence, not to bring up the sick animal too fast. Give plenty of fresh air, and keep in as unchangeable an atmosphere as possible. As to the preventive treatment whether there are any symptoms or not, I would take about two quarts of blood, and notice the condition of the serum; and if it present much the same appearance as diseased cases, the animal may be considered in danger; then commence at once to give him Nitrate of Potassa, 1 oz., Antimony, ½ oz., Flower of Sulphur, ½ oz., well ground together. Give this quantity three times a day in bran or ground oats, and continue this for two or three weeks, keeping the animal warm and dry. At the end of this time, all inflammatory tendency will be reduced, and when faithfully carried out, I found it successful in every way.

Kent Co., Del. Wm. M. Bonwill, M. D.

For the American Agriculturist.

Hints on Fattening Pork.

It is usual with many farmers to put this off until cold weather sets in. The pigs run in the woods, the road, or the pasture, picking up a scanty living, and come to the pens lean and hungry, when they ought to be fattened. In our practice we keep pigs in the sty the year round. We find them quite too valuable co-laborers in the manufacture of manure to allow them to waste "their sweetness upon the desert air." A pig is worth ten dollars a year for this purpose alone, if you will give him the material to work with and plenty of food. But possibly it may pay for a little time in the Summer, to keep the sow and pigs in a good clover pasture where grass is more plenty than corn upon the farm. If this be done, all of them intended for the butcher by Christmas, should be shut up immediately, and be fed with all they can eat. A squealing pig is worse for the owner's pocket than for his ears. It is much easier to make pork in September and October than in December and January. No extra amount of food is wasted in keeping up the animal heat. It all goes to fat and muscle. Variety of food is a matter of much importance in fattening swine. At this season a greater variety is easily commanded. The garden, if it is a good one, yields a great many refuse articles, squashes, beets, carrots, apples, melons, tomatoes, and corn, which will find a good market in the sty. One of the best articles of food for them is sweet corn, cut up by the roots and fed whole. They are very fond of it, and it makes them thrive very fast. A half acre near the sty may be profitably cultivated every year expressly for this purpose. If this be not on hand, corn from the field may be fed in the same way once a day. But swine need something more than green stuff however nutritious, to make them fatten rapidly.

The cooking of food is much more economical than is generally supposed, especially upon the farm, where fuel costs little but the labor of preparing it. We think about one third of the value of all the grains usually fed to swine, is saved by cooking. A boiler or box for steaming is indispensable in every well arranged swill house. In this the meal may be cooked and thoroughly mixed with the roots and other vegetables. The meal absorbs large quantities of water, is more highly relished by the pigs, and is more perfectly digested. Numerous experiments fully prove the economy of cooking the food under ordinary circumstances. Some claim that they can make pork for less than three cents a pound in this way. A dairy farmer of this State made one year 4,227 pounds of pork. The feed with which he did it, was 4,127 pounds of corn and oat meal at $1.50 a hundred, 470 pounds of shorts at 75 cents, 147 bushels of potatoes at 16 cents, all of which were cooked, and half an acre of green peas worth say $15; making the total cost of feed $103.95, or not quite two and a half cents per pound for the pork. The value of the whey and sour milk was not reckoned. This and the labor of feeding, with the fuel for cooking, are very properly balanced against the manure they made. There can be no doubt that cooking the food pays well.

A dry, warm place for sleeping is another important item in keeping swine thrifty. They should have a good sty with roof and board floor, and plenty of straw so that they can keep themselves clean. With these conditions pork can be made very fast, and the sty will be found to pay as well as any part of the farm arrangements.

CONNECTICUT.

Sheep Husbandry......IV.

WINTER TREATMENT.

The favorite method with the careless farmer is to feed them at the stack with his young cattle and colts, or let them take their chance in the open yard with the cows and oxen. Here they are hooked about, scared from their food, and not unfrequently maimed or killed. It is thought that sheep can live on the refuse of the yard. But the man who means to make sheep profitable, must have a place for them and attend to their feeding. The Winter is the most critical time with them, and many a flock is more than decimated by neglect. The crows have rich pickings of mutton, and the boys hard pickings of pulled wool, along in the warm days of the opening Spring.

After the snow begins to fly, and the Winter has fairly set in, we are decidedly in favor of keeping sheep in the yards provided for them. It is true there will be open spells when they might pick something from the pastures, but the feeding at this season is bad for the roots of the grasses, and not favorable to the thrift of the flock.

The selection of a location for the sheep yards and sheds, is a matter of very great importance. Whether you feed them for stock or for the butcher, you must have a dry location—if not naturally so, made such by drainage. If the ground is wet, your flock will soon be in trouble. Much of the prejudice against confining sheep to narrow quarters arises from the neglect of this precaution. The sheep have the foot ail, and contract diseases in wet yards and sheds, and the evil is charged to close confinement. The fact is, the sheep is naturally gregarious, and if favored with a dry bed and plenty of fresh air, will thrive in small enclosures quite as well as other domestic animals.

One of our most successful farmers, who sometimes feeds five hundred at a time for the market, confines them to sheds either with a small yard in front, or no yard at all. Sometimes seventy five are shut up in a shed twenty one by thirty six feet, with a yard about eight feet wide on the southern front. But in this case, the shed is well furnished with absorbents for the manure, and is kept littered with straw, and at the back side, a board a foot wide swings upon hinges, so as to keep up a thorough ventilation. With this care the flock thrives and lays on flesh as kindly as if in larger quarters; without it they would do poorly with any amount of room. Sheep must be kept clean and free of foul air. They love the dry atmosphere and the free breezes of the hill tops.

If yards are allowed, some provision should be made for confining them to the sheds in stormy weather. It takes a great deal of food to dry a thoroughly soaked fleece in winter, to say nothing of its bearing upon the health of the animal. It is much better that this food should go to form muscle and fat. The sheds in all cases where it is practicable, should open toward the South, so that the Winter sun may come in upon them as much as possible. The sun has a wonderful influence upon the animal economy. In small sheds and yards, a less amount of straw is needed for litter, and the manure is more easily managed—an important consideration.

The sheds must be furnished with racks and troughs, so that they can be fed with hay, grain, or roots, at the option of the owner. There should be room enough for all the sheep to feed at once.

A rack or feeding box of convenient size for use and for moving, may be made as follows: For the posts, take pieces of any good hard wood, 2 by 2½ inches, six in number; one for each corner, and for the middle of the sides. For siding and ends, take boards twelve feet in length, twelve inches wide for the bottom, and eight inches for the top. This will give you an opening of ten inches for the heads of the sheep, if the posts are thirty inches in length. But they can readily be made a little longer or shorter, according to the size of the sheep you wish to keep. For the bottom, take three narrow strips of board, one at each end, and one in the middle. Upon these, fasten a board twelve inches wide, running lengthwise through the middle. This is for the bottom of the trough. Upon each side of this, put in a board upon a bevel, extending to the sides of the box. This will make the bottom dishing at the sides, and tight, for holding grain, meal, roots, or any thing else you wish to give them. This box may be made with wooden pins, or nails, but the best fastening is stout screws, about two and a half inches in length. In the moving about, the boxes are subjected to a considerable strain, and screws will be found the cheapest in the end. Such a box as this will accommodate about twenty large sheep. It is easily turned over and cleaned without sweeping, and readily put away for the Summer. This kind of feeding apparatus has been in use in this country for at least forty years, and is, on the whole, the handiest contrivance we have ever met with. It will pay any man who keeps sheep, to have enough of these made to accommodate his whole flock. In the common slovenly way of feeding upon the ground, more fodder will be wasted than would pay for the boxes. The sheep is a cleanly animal, and its tastes should be consulted.

Selection of Sheep for fattening.—Few farmers raise the sheep they feed for the market. The best districts for raising sheep are not always the best for preparing them for the butcher. The mountainous regions that yield abundance of grass, are not so good generally for grain and roots. The farmers who live near good markets, or whose farms are well adapted to grain and roots, can fatten sheep to better advantage than those who live in a more broken country. But much of the success of feeding depends upon skillful buying. The refuse, cheap sheep of light weight, are not the ones to be fed with most profit. As a rule, it takes no more food to finish off for the butcher a sheep weighing a hundred and fifty pounds, than one of a hundred pounds or less. They will gain much faster, and give you more money for the food consumed. The same constitutional habit that has made them thrifty in the light hill pastures, will make them gain faster in the feeding yards. Therefore purchase the larger sheep, even if you have to give more for them in proportion to their size than for small ones.

Feeding.—The practice of skillful farmers differs considerably here, both as to time and the articles of food consumed. Some feed thrice daily, others four times; viz., early in the morning, at 11, at 1, and at evening. Whatever times are selected, the feeder should be on the spot at the appointed hour. Regularity in feeding is a prime element of success in the fattening of all domestic animals.

In the change of the flock from the pastures to the yards, care should be taken not to over feed them with grain at first. The quantity of meal, grain, or oil cake, may be gradually increased from a handful up to a pound for each sheep daily, beyond which quantity it is not ordinarily profitable or safe to go. Too high feeding with meal or oily food, sometimes leads to sudden death, and the butcher loses his mutton, and you lose your profits.

The sheep, as well as any other domestic animal, loves a variety of food, and will do much better upon three sorts daily, than upon any one. Whatever bill of fare be made out for them, clean sweet hay should always be the staff of life. They are very fond of turnips, and these may form a part of the daily food, both in the Fall, before they come to the yards, and while they are in confinement. Carrots, beets, and other roots are also highly relished. Some one of these will profitably form one of the daily meals. For fattening, they also need some kind of oily food, as oil cake, cotton seed cake, or Indian meal, or corn. They relish almost all the grains, and these may be fed to advantage where the farmer raises them, or can buy cheaply. The straw of the grains, oats, wheat, and rye, if run through a cutter and mixed with a little oats, or meal, can be profitably fed. Beans are an excellent feed, and are more greedily eaten by sheep, than by other kinds of stock. They need neither boiling nor grinding. Indeed, there seems to be no profit in grinding any of the grains for this animal, so perfect is its mastication.

Sheep Manure.—One great advantage of putting sheep under sheds in the Winter, is the large quantity of manure you are able to make by the process. You can use all the muck that is desirable, without any danger of miring the sheep, as is the case in large open yards. The whole area of the shed and small yard attached, may be covered to the depth of a foot or more with muck, and not an ounce of the manure, liquid or solid, need be lost. This muck should be kept covered with straw, or refuse hay of some kind; so that the sheep may be dry at all times. In the books this manure stands high among fertilizers, and judging from what we have seen of its effect upon crops, it is not at all over-estimated. It is quite equal to the manure of the sty. While in the yard and trodden by the feet of the sheep, it is in no danger of fermenting. In the spring when the yards are cleaned out, if it be not immediately spread upon the soil and plowed in, it should be mixed with additional muck, as it is very prone to fire-fang.

Profits of Sheep Husbandry.—It would perhaps be too much to say that no animal pays better upon the farm than sheep. The amount of profit will depend something upon location and upon the character of the farm. Where the circumstances are favorable, we are confident it will pay well enough to keep sheep and to feed them for the butcher. This business is attracting more and more attention in the North and East every year, and mutton enters more largely into the family marketing. Many of the farmers on the Connecticut, in New-Hampshire and Vermont, are feeding all the grain they can raise to sheep. They buy wethers, and put them up about the 1st of December, feeding on cob meal and oats for grain. In March they shear them, and send to market when they will weigh 150 pounds and upward, and will bring from four to six cents a pound live weight.

Right on the Dog Question.

In these days of political truckling and neglect of executive interference in behalf of the welfare of the community, it is refreshing to meet an instance of such outspoken decision and firmness for the right, as is manifested in the following letter of Gov. Randall, of Wisconsin. He had received many letters inquiring if he had really signed the "Dog Law" recently passed by the Legislature of that State, and which was printed in the *Agriculturist* for July. The writers also made complaint of the difficulty of enforcing the Law. He replies thus:

> EXECUTIVE OFFICE, Madison, July 6, 1860.
>
> *Dear Sir:* Your letter in regard to the "Dog Law" is received. The bill was properly signed, and is the law of this State; and that law will not be repealed with my approbation, while I remain in office. No good citizen will object to it, or refuse to obey it. A man who is able to own a dog, which costs as much to keep as to keep a cow, is able to get a collar for him. No good citizen will refuse to make the sacrifice of obedience to that law, when he must know that if it is enforced, it will save to the farmers and stock-growers of this State from $40,000 to $60,000 every year, and increase the number of wool-growers very largely. Every human life lost by the bite of a dog, is worth more than all the dogs in the country. A man who is not willing to sacrifice one dollar for his privilege, where so great a benefit may accrue to the State by compliance with the provisions of the act, ought to be kicked out of it. Very truly yours,
>
> ALEX. W. RANDALL.

Don't give Pumpkin Seeds to Cows.

A subscriber sends a long communication against feeding pumpkins to cows. The writer's reasoning is not entirely sound, and does not agree with our own experience and observation. As a general rule we are quite sure that pumpkins increase rather than diminish the amount of milk; and instead of making neat stock grow poor, we have fattened large numbers of cattle on pumpkins alone. There is one suggestion in our correspondent's letter, however, which may be worthy of attention. He refers to the fact that the seeds of pumpkins have a decided *diuretic* (urine producing) effect upon the human organs, and that if they have the same effect upon cows, the excessive flow of urine must necessarily reduce the flow of the milky fluid. He advises that when pumpkins are fed, the seeds should be taken out. This idea is plausible, and worth acting upon.

For the American Agriculturist

Shoeing Horses.

In the July number of the *Agriculturist*, I noticed an article on the "Contraction of Horses' Feet," with which I agree on some points, while on others I must disagree. The slight contraction of horses' feet does not necessarily produce unsoundness. Yet all unnatural conditions of the hoof are dangerous, and should be prevented if possible.

I think, however, that the removal of shoes every three or four weeks, shortening the toe, thinning the sole, etc., instead of being a remedy for the difficulty, will, in three-fourths of the cases, produce it and many other unnatural conditions of the foot. Thinning the sole, as well as trimming the frog, except to remove the rotten substance, has a bad tendency, especially when the horse is used on hard roads in dry weather. It destroys the moisture and elasticity calculated to promote the growth and expansion of the foot. Shortening the toe, though measurably necessary, requires the exercise of some judgment. Although enough should be taken off both at the bottom and front to leave the foot in good shape, care should he taken never to weaken it, as much in a good foot depends on the firmness of the toe.

If shoes are properly forged, fitted, and put on, they can remain from five to seven weeks without inconvenience, where the horse is used constantly on hard roads, or from eight to twelve weeks, and even longer, where he is moderately used on a farm; and it is highly necessary they should stay from six to eight weeks, to afford the foot time to grow and accumulate moisture and elasticity—further time than that is a matter of economy, but they should not be allowed to remain longer than from twelve to fourteen weeks. I know horses used on farms, that have been shod regularly only four times a year for many years, that are the best of animals, free of all lameness, with perfect shaped feet; and many that work partly on the roads and partly on the farm, which are shod every two months, and are always in good order for work. I have worked in shops where often shoeing, whittling and burning, with the use of a little strong medicine, kept many a poor animal in misery.

When a shoe is accidentally pulled off, or is loose three weeks after setting, it should be considered a misfortune, and the horse taken to the shop, if possible, without injuring the hoof. Care should then be taken to use as many of the old nail holes as are sound. Avoid nailing to the hoof with shallow nail holes, which are apt to give way or split off. Avoid also leaving open old nail holes which terminate on the shoe; they hold mud and sand to rot the hoof. In case of shoes being pulled off when the horse is at work, every farmer and teamster should be prepared with a leather shoe to be worn to the shop. This may easily be made of an old boot leg, by fastening a few thicknesses of heavy leather for a bottom or sole, and splitting it behind, to tie it around the foot.

I have treated a number of cases of hoof-bound horses to great advantage, and some have been permanently cured, by shoeing with shoes of good Swede iron, forged narrow in the tread, and fitted as wide at the heels as they would permit, with the calks inclining outward, and the foot carefully cleansed of all dead substances. The shoe was tightly nailed close to the heels, and spread with a pair of tongs, (a simple process known to every blacksmith,) about a quarter of an inch, or until the heels are visibly opened; then, spread once in two weeks, and again in four weeks, and reset at the end of eight weeks, all the time keeping the hoof moist with fish oil. I never knew a case benefited where the blacksmith was so often applied to as to impede the part of the work designed to be done by nature. MAHLON BAKER.

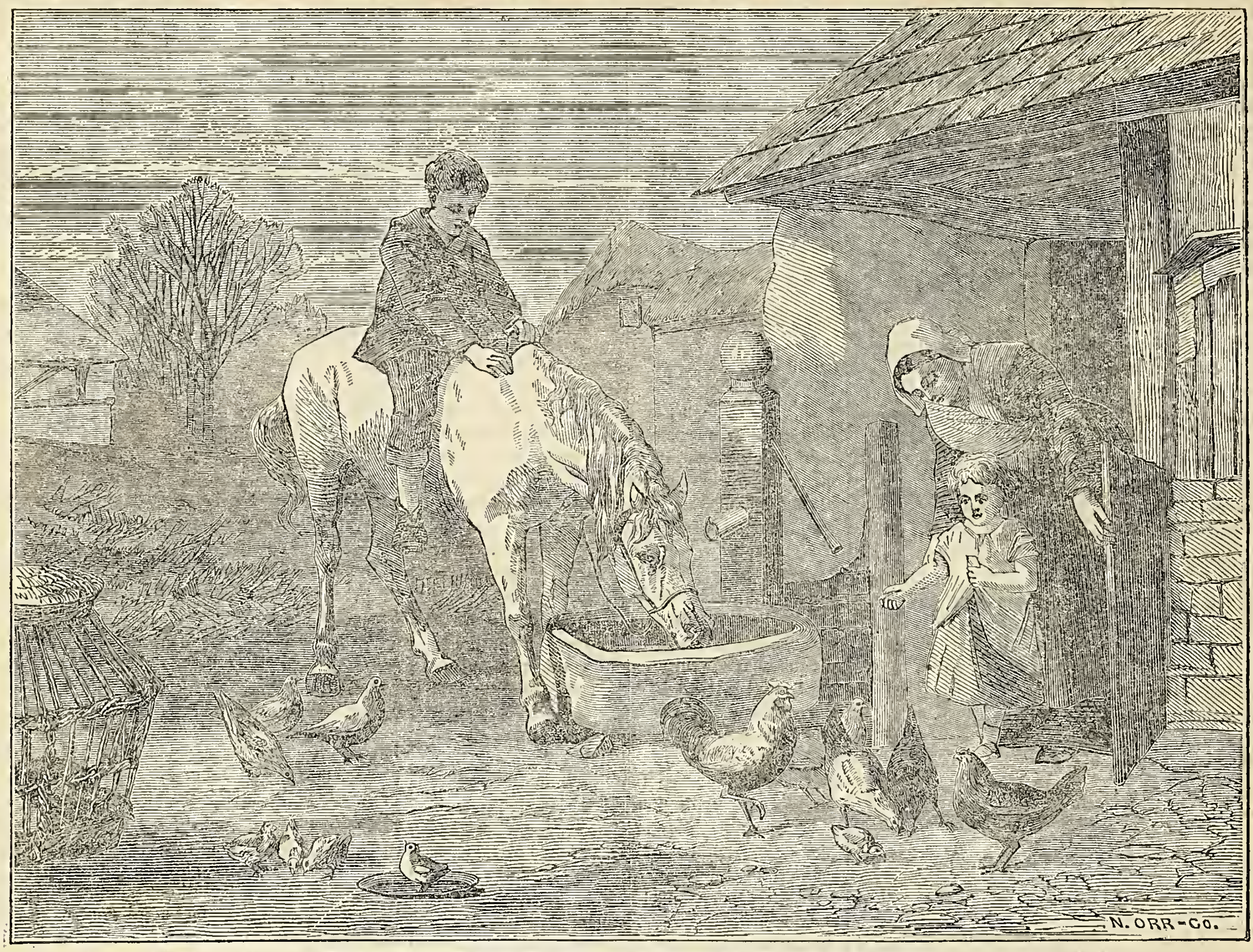
Dearborn Co., Ind.

Hints on Horseback Riding.

A person riding on horseback, is either a most graceful, or a most awkward object. A man may walk without much elegance, and still attract no particular attention, but a bungling performance on horseback makes the unhappy sufferer the butt for every beholder, and he can rally nothing of self-respect, to shield himself from the full force of ridicule. A poor rider feels as meanly as he looks. How can a man think well of himself, as he is helplessly *jounced* about like a lump of putty, his elbows flapping up and down like the wings of a Shanghai rooster, his brain confused in the endeavor to find his center of gravity, and his pantaloons hitching up over the tops of his boots. But to one who knows how to keep his seat properly, to so adjust himself that he shall appear a part of the animal that carries him, there is nothing more exhilarating, or that will make him feel more a man. A buggy, with its soft cushions and easy springs, may do for "nice young men," and the indolent or timid, but give us the invigorating trot, or the luxurious gallop of the living animal, with a spring in every muscular fibre, to thrill and strengthen every nerve and muscle of the rider.

One great secret in correct riding is, to make the seat the center of motion. The tyro shortens up the stirrup straps, that he may support his weight upon them, he then throws the body forward, and each spring of the horse raises him clear from the saddle, propelling him forward by a not very gentle application of horse-power in the rear. His feet are the center of motion, and he oscillates forward and backward like the piston rod of a steam engine, and the reaction upon the horse adds greatly to his fatigue. While in this position, should the horse stop suddenly, or stumble badly, the rider goes on independently, and finds himself upon the horse's withers, neck, or over his head, as the case may be. From the first, the rider should learn to hold himself firm in the seat, by grasping the side of the horse with the thighs. Let them be a vise, from which no plunge of the horse forward, upward or sideway can extricate him. Keep the body erect, or slightly inclining backward, the feet feeling the stirrup beneath, but not resting there to support the body. Let the toes be nearly parallel with the sides of the horse, or but slightly inclined outward. The muscles of the body above the hips may be relaxed, to yield to the motion imparted by the animal. Keep the elbows by the sides, not constrained, but resting there naturally and easily.

Never depend on the bridle to keep in place upon the saddle, let that be done with the muscles of the thighs. This position will be



FARM HOUSE PORCH—From a Painting by Walter Goodall.
(Engraved for the American Agriculturist.)

tiresome at first, and the beginner should ride but a short distance at a time, until the muscles are accustomed to the use required of them. Horsemen differ as to the propriety of using one or both hands for the bridle. A horse properly trained, can easily be guided with one hand. For this purpose the reins should be drawn just tight enough, to feel the horse's mouth, then a slight turn of the hand to the right or left will be sufficient. An animal soon becomes acquainted with the peculiar manner of one who uses him frequently, and may be taught, in a short time, to turn at the increased pressure of the leg upon either side, and to take a different gait at the mere touch of the bridle.

Where there is danger from stumbling, it is safest to ride with a rather loose rein; the horse can recover himself much more readily, if he have command of the muscles of his head and neck. He will also more easily discern and avoid obstructions, if his head be left in its natural position. To bring a horse's head and neck into a painful position by a standing martingal, is both cruel and dangerous; he will fall upon a slight stumble.

Absence of Mind.—A *tough* one is told of a clergyman who went jogging along the road until he came to a turnpike. "What is to pay?" "Pay, sir! for what?" asked the turnpike man. "Why, my horse, to be sure." "Your horse, sir! what horse? Here is no horse, sir!" "No horse! Bless me," said he, suddenly looking down between his legs, "I thought I was on horseback."

This beautiful Picture, the production of one of England's most gifted artists, presents a scene that cannot fail to give pleasure. The painter seems to have caught the very spirit of rural quiet that surrounds and gives a charm to country life. From the mother bending over her child, down to the little chick drinking from the pan, every part is true to nature. How much more attractive is such a picture than the representation of the most splendid pageant. Painters well understand that there is no beauty like that of nature, and their highest success is attained by faithfully copying her. Is it not singular that those living in the midst of such scenes should so little appreciate them? and that they should find greater attractions in the gaudy shows of city life? It would be strange, were it not that an appreciation of, and love for the beautiful, are greatly dependent upon culture and intellectual refinement. It is not merely the landscape, nor the eye, that are concerned in awakening the pleasing emotion of the sense of beauty, the mind is the canvas on which the tints and grouping must be thrown to give the "sweet satisfaction."

The study of the works of such masters of art is one of the surest means of developing and correcting taste. After examining such a print, one turns almost with contempt from the coarse, cheap engravings that are spread upon the pages of many of the flashy papers of the day.

It is greatly to be desired that the love of the beautiful should be increased. When it is fairly awakened, its effects will be seen in the improvement of the dwelling, the cultivation of flowers, the planting of trees, and in the more genial spirit which a home so adorned, brings to its occupants. We have repeated this sentiment again and again, and still continue to urge it, for it has much to do with the happiness of the household.

We instinctively associate the beautiful with the good and virtuous, and not without reason. There is little room and less desire for the excitements of vice, when the mind is entertained with more pleasing images, and hence it is that we are not disappointed in our expectations of finding a higher moral tone prevailing in the country, where nature's gifts are bestowed without stint. He who surrounds his dwelling with objects of taste, erects a strong barrier against many temptations to evil—a hedge of roses will more effectually keep boys from straying from the homestead, than a hedge of thorns, and girls, who find satisfactory pleasure in the cultivation of flowers, will care little for fashionable display.

Facts that Bear Repeating.

SOURCES OF NOURISHMENT—COLD AND WARM SOILS.

Plants have very little locomotive power. They can send abroad their seeds on the wings of the wind, they can stretch their roots out on every side, but the plants themselves must remain where they are set by chance or the hand of man; they cannot go about in search of food. If our fields and gardens do not contain the kind of soils which our plants need, they must die or lead a miserable existence, unless we come to their aid. As plants are quite different in their habits and wants, they must be treated to different kinds of earth and exposures. And it is no smal part of a farmer's study to ascertain what these various demands are.

One thing is very plain, though many are slow to learn it, that some plants derive a larger part of their nourishment from the air through their leaves, than from the earth through their roots. Take an interesting illustration which has just fallen under our notice: The Tropæolum tricolorum often attains twelve to fourteen feet in hight, and it has a thousand or more leaves and flowers, yet the stem near the ground is fine and hair-like. Is it possible that all this foliage can derive much of its sustenance through that delicate stem? It must come chiefly through the leaves. So it is with clover and many other plants. When a farmer plows in a crop of green clover, he plows in more manure from the atmosphere than from his barn-yard.

Some seeds require a warmer soil to germinate in, than others do: some seeds and plants seem at home in cool and moist ground. Of such like facts, the farmer should have a full knowledge.

Land which has a large mixture of clay in its composition, is cold. It does not absorb heat as readily as one into which sand largely enters. Dark colored soils conduct heat better than light colored. Everybody knows that a black coat in the month of August is hotter than a white one. So a dark soil, other things being the same, is warmer than a light one. Yet not always so. Black soils sometimes contain large quantities of vegetable and carbonaceous matters which, though they attract heat from the sun, do not conduct it well. The surface may be very warm, but the body of soil beneath may be quite cold.

Wet soils are uniformly cold. The process of evaporating the water carries off heat rapidly. Every farmer who has attempted to reclaim swampy lands understands this very well.

But we need not pursue this subject into further detail. As nearly all the plants with which farmers and gardeners have to do, prefer a warm soil to a cold one, it becomes us to inquire how our lands may be brought to possess this general character. Clayey soils can be ameliorated by deep tillage and by frequent dressings of sand and lime. If, on the contrary, our lands are too light and sandy, they may be improved by dressings of clay and by ashes. Wet lands, of course, demand draining. The abstraction of water is the addition of heat. Draining is their first and greatest want.

Hearing Corn Grow.

A Western farmer who wished to impress one of his Eastern friends with a suitable idea of the fertility of his land, gave this illustration: "While riding along the road, I heard a pig squealing at a distance, and looking over into the field, I saw the animal on a full run, followed by a pumpkin vine which grew so fast that it reached the fence, run through, and a good sized pumpkin was formed before the hog got across the field." Not quite so strong was the story we used to hear told by one of our hired men about the growth of corn. He said he was hoeing corn on a hot June day, when he heard something behind him squealing. He thought it proceeded from field mice, but as it followed him, he examined carefully, and found it was the corn he had hoed. He said "it grew so fast it fairly squealed."

We don't know what has become of that man, but there is reason to suspect he has settled in Ohio, and has recently taken to writing agricultural editorials for a leading daily paper in this city. Be that as it may, in a recent number of the journal referred to, the writer, speaking of the richness of the Sciota Valley, says: "You have probably heard the remark, 'our corn grows so fast that you can hear it.' This is supposed, by people who don't know, to be a figure of speech only; but the remark out here, is a literal fact. Go into one of these 'bottom' corn fields forty or fifty rods on a warm July day, or August night, when a bright moon is up, (for vegetation grows faster in moon-light than in darkness), and a few hours after a heavy shower that has fairly wet the earth, and waked up the drowsy corn to its influences, and as the main stalk stretches and swells in its new strength up through the contracted lips of the upper blades, they crack and burst around you like the stifled reports of ten thousand rifles! That corn field will be some inches higher at sunrise the next morning than at the last sundown. There is no mistake about it. *We have heard corn grow* many a time, and so every farmer along in the Sciota valley will tell you."

Let us apply figures to the above. The most rapid growth we have heard assigned to corn is 10 inches a week, or say 1½ inches per day, or an inch in 16 hours, which is one-sixteenth of an inch in an hour, or about the one-thousandth part of an inch per minute—less than one-third of the thickness of ordinary writing paper. Will this addition, mainly to the outer surface and to the ends of the leaves, produce the "stifled reports of ten thousand rifles?" We fear that with such a tremendous cracking and bursting of leaves, the corn would present a woful appearance after a few nights' growth. We suspect that no where else than in the Sciota Valley will corn be found "some inches higher at sunrise than at the last sundown," especially as it is generally admitted that the chief growth is under the influence of sunlight.

The Mammoth Vegetation of California.

There is, we think, some misapprehension about the wonderful vegetable productions of the Golden State. It is commonly supposed that the monstrous growth there of young trees—as, for instance, of an apple-tree twelve or fifteen feet high in a season—is the uniform style of growth; that the pears weighing three and a half pounds, the enormous turnips, beets, onions, cabbages, etc., are the ordinary productions of the country.

But it is now stated by a gentleman of the highest integrity and intelligence, (Rev. Dr. Bushnell,) for some time resident there, that this is hardly a correct view of the case. These mammoth growths do indeed occur, but they are freaks of nature, and exceptions to the general rule. The ordinary fruits, he says, are no larger than our own, and where the trees become overloaded, are quite small. The extraordinary growths sometimes seen, may be easily accounted for. First, there is, in some places, a depth and richness of soil, of which people living on the Atlantic coast can form no idea. Next, there is either a natural supply of water from springs under ground, or it is furnished by artificial irrigation. Again, the climate is remarkable for its clearness and warmth; and the growing season extends through almost the entire year. Then, too, the settings on fruit trees are generally limited, so concentrating the entire forces of the tree into the growth and ripening of a few specimens. Thinning out fruits here, is known to produce great results.

Hence we say, it is not so wonderful that fruits and vegetables which happen to enjoy all of these favorable circumstances, should grow beyond ordinary limits. But such depth and richness of soil and such irrigation, are the exception to the general rule, and where these are not found, the wonderful growths do not appear.

Then, in reference to the famous Big Trees, *Sequoia gigantea*, or *Wellingtonia*, of which so much has been written, our authority says: "They depend in part on the same contingencies, and partly on the remarkable longevity of the species. A tree that is watered at its roots, having a deep, almost immeasurable mold in which to stand, and not so much as one hour's umbrella of cloud to fence off the sun for the whole warm season, and a capacity to live withal for two thousand years or more, may as well grow three hundred and fifty or four hundred feet high and twenty feet in diameter, and sound to the center, at the age of thirteen hundred years, as to make any smaller figure with conditions proportionally restricted."

Of grape-culture there, he says: "It promises much. Whether it can be successfully prosecuted without irrigation, is doubtful, though it is well known that old, deep-rooted vines will bear a crop without. It is commonly believed that California is hereafter to become the great wine-growing country of the Pacific."

"The apples are large and fair, and wonderfully precocious in bearing, but there is reason to suspect, from experiments made in the old Mission-gardens, that they may be short-lived."

"The strawberry naturally dries up after bearing one crop, but may be made to fruit several times a year if artificially watered."

California, however, like all other countries, has a variety of soil, including all shades of fertility.

Small versus Large Farms.

PEEP INTO A FARMER'S ACCOUNT BOOK—ANECDOTE OF BAKEWELL.

By means of a little stratagem, with perhaps a little editorial impudence, we managed the other day to get hold of a farmer's private account book, and notwithstanding our previous strong belief in the theory that the same amount of capital, labor, and skill, expended upon a small farm, is more profitable than if spread out over one twice as large, we confess to having been a little surprised at the facts and figures the book revealed. We will call no names, and therefore betray no confidence if we publish some notes from the book. The farm contains 97 acres, 8 of which are woodland, and 2 are taken up with a lawn, and about 3 more by a street and lanes, leaving 84 acres in cultivation. The farm cost $13,400. The proprietor is the son of a wealthy man in business in New-York, and he remained in his father's office until 22 years of age, where he acquired thorough business habits. In accordance with his own choice, his father bought and stocked this farm for him, instead of establishing him in business in the city. We found in the account book a careful record of every penny of income and expenditure, even to the sale of some old iron, and the small sums paid for children's toys, transient newspapers, etc., etc. All farm produce, vegetables, fruit, etc., from the farm and garden consumed in the family, was charged to "family expenses" at the market price. Cash received and cash paid out were so accurately recorded, that at the end of one year we find a difference of only 17 cents in the footings. A daily record was made of every transaction, and the items were re-arranged in ledger columns in the second half of the same book, under the several heads of "family expenses," "personal expenses," charges to separate fields for manure, labor, and seed, with credit for returns, etc. Under a subdivision of family expenses, we find charges for carriage and horses with driver, but a credit was given for all the work the man did upon the farm, and the amount was charged to the farm.

But to omit further particulars, let us look at the results shown by the balance sheet. The family live in good style, entertain their friends, travel somewhat, annually, etc., and yet, after deducting all expenses of every kind, including the interest on the land and stock, depreciation of implements and buildings by wear and age, and adding a small amount for permanent improvements, but nothing for increased value of land, the balance sheet showed a net profit for one year of $1,483 67. The total charge under family and personal expenses, exclusive of rent which was not reckoned, amounted to $1,321 44, which, added to the net income, would make the net profit $2,805 11. The principal crops were hay, corn, barley, oats, peas, potatoes, carrots, and turnips, and one acre in cabbages.

Now for the lesson which this example teaches. The proprietor devotes the same thought, energy, and business tact to his present occupation, that his father has given to his city pursuits. His table is supplied with half a dozen of the leading agricultural papers, two or three weeklies, (including one local paper, and one church paper,) and one daily which gives him the general news and keeps him up with the state of the market. One great secret of his success, and the one to which we wish to call particular attention, is in the fact that he cultivates no more land than he can cultivate well. He could, by the asking, have an adjoining farm, (his father would purchase it for him,) but he says he has all the land he can attend to, *and doubts if he could use any more profitably.* His soil is naturally of only about average quality, but every foot is brought to the highest fertility by thorough tillage, and especially by manuring. Besides the large amount of manure made upon the farm, we found charged to farm expenses for one year $816 25 paid out, in part for Peruvian guano, ashes, bone dust, etc., but mainly for stable manure brought from New-York, partly in wagons returning from market, and partly in sloops by water, and carted inland.

The above example is far from being the strongest one that could be given to show the profit of comparatively small areas of land; it is a case of general farming done in a thorough manner, and it may be studied with profit by that large class who always feel poor until they own all the land in sight of their dwellings. From an observation somewhat extended, we have come to the conclusion that very few men comparatively are capable of cultivating 100 acres of land perfectly; and we judge that by far the largest class would make more money at farming if their acres were positively limited to fifty, at most.

Another lesson to be derived from the above example should not be passed over. We asked the proprietor if he did not sometimes regret that he had not gone into business in the city, where he might have accumulated a large fortune? His answer was in effect, that he was abundantly satisfied; that he really labored less there, and suffered far less anxiety than most business men in the city; that ninety-five out of every hundred who commenced business failed, and not one in a hundred became wealthy, and he was not sure of being among the successful ones; that he lived independently on his farm, unannoyed by city turmoil, and untrammeled by city fashions; that his children were growing up healthy and uncontaminated by the moral or physical atmosphere of the city; and finally that his net income was enough to satisfy any reasonable man.

Apropos to the above, we give an anecdote of the late Mr. Bakewell, the noted stock breeder of Dishley, England, which is related in a lecture by Mr. Beasly, recently published in London: Mr. Bakewell was not only an eminent farmer and stock breeder, but a very shrewd man, and his neighbors were in the habit of resorting to him for counsel and advice. On one occasion an old friend went to pay him a visit for the purpose of explaining to him his position, and at the same time begged that he would recommend him what to do. He had lived all his life upon his own farm of 1000 acres; he lived very well, but he had never saved a shilling. He had three daughters, and the eldest was about to be married; he highly approved of the match, but the intended husband expected some portion, and he had nothing to give him. Should he mortgage his estate, or what should he do? Mr. Bakewell begged him to spend the night with him, and promised the next morning to give him the result of his cogitations. Accordingly, the next morning, when they met at breakfast, Bakewell said, "I have made up my mind what you ought to do; give your son-in-law one-fourth of the farm, keep the remaining three-fourths, do not part with any portion of your capital and stock, and work the remaining three-fourths with it. Do it better than you have hitherto done, and your income will be rather increased than diminished." His friend followed his advice; but at the end of two or three years, another daughter was to be married, and the perplexed father again resorted to his friend Bakewell for advice, under this new difficulty. Bakewell coolly said, he had watched his proceedings, and seen their results; he must do in this case as he had done before; he must give up another fourth of his farm, and keep the original capital and stock. The father seemed somewhat puzzled, but, as the first experiment had succeeded, he determined to try it in this case also. Last of all the youngest daughter was to be married, and, in utter despair, the poor father paid another visit to Dishley to explain his perplexity. "Well," said Bakewell, "tell me honestly whether your income has diminished by having reduced your farm by one-half!" The father acknowledged he thought it had not. "Then," said Bakewell, "you must give up another fourth of your farm, and keep the remaining 250 acres for yourself, and, to tell you the truth, you will then have just such a farm as your stock, your capital, and your head are fit for, and will be a better and happier man than ever." Old Bakewell used to tell this story with great glee, and declared his friend left as much stock and capital upon the 250 acres as he had ever had upon the one thousand, and, as he believed, made a better income out of it. This may be a somewhat exaggerated statement, but of this I am sure; a small, well cultivated farm, will make a better return than a large ill-cultivated one.

We give up the Moles.

For several years past we have taken the part of the moles, so much so, that one old gardener was heard to say: ".... the *Agriculturist* was generally so accurate that he could, without reading it, sign his name at the end of every number as an endorser, if the editor would only promise never to say another word in favor of moles." Well, we are at last almost ready to make that promise. Moles feed largely on insects, and we *have* thought the good they do in this way, would overbalance any depredations they might be guilty of. Just walk out with us into our vegetable garden. Here are eight rows of corn, each sixty feet long, and seven of the rows are good for nothing. They were planted in drills, the soil being loosened and mixed with manure before the seed was put in. The corn came up nicely and promised well; but in one night, the moles, just for the fun of the thing, commenced at one end of each of the drills, and following the loosened earth from end to end, every shoot of corn in seven rows was unceremoniously lifted and uprooted. The ground was replaced, and the soil packed down, and a flat stone set across the ends of the mole paths. Very soon after, the rascals entered the drills inside of the stones, and again threw out the corn.

Here are 50 hills of sweet potatoes which were nicely formed and rounded up. The moles have plowed through the entire patch in all directions, disfiguring it, and spoiling many of the plants. There, are some nice strawberry beds, all laid off with regular paths between them. The moles have cut up the ground as badly as a regular troop of sappers and miners, and but for the persistence of these hardy plants, many of them would have been killed. As it is, they are much injured, and the beauty of the beds is destroyed.

So it is all over our grounds, not excepting a fine new lawn. The thorough spading of the earth last Spring seems to have prepared it just to suit the moles, and they have come from elsewhere, or multiplied wonderfully, so that there is no living with them. We can catch and destroy most insects, for they work above ground as if engaged in an honest business, but these sneaking "varmints" that stealthily work under the ground, we can endure no longer. War is proclaimed, and we now write to ask some of our more experienced readers to tell us how to wage it most successfully. Traps we have little faith in, so far as we have seen them. We would meet stealth with stealth, by resorting to secret poison, but we have not yet succeeded in getting the enemy to eat it. What shall be done?

Follow up the Apple Borer.

It is not yet too late to get at this most destructive enemy of our orchards. In the Summer, many farmers are so busy, that they do not find time to look after his depredations. He does his work in the dark, and, unlike other enemies, there is nothing to remind you of his presence, until he has done the mischief. Caterpillars attract attention to their mischief by weaving their silken web over their young. The signal is as distinct as the sign of small pox on a white flag, and you have fair warning. The scale bug also hangs out his banner, and the most careless observer can see, at a glance, that a brush and soapsuds are in demand.

But that sly scoundrel grubs about the collar of the tree, on the most sheltered and secluded side, and nothing but close inspection will disclose the sawdust, which is the unfailing sign of his presence. Every tree in the orchard, or garden, and every quince bush should be examined, at least twice a year, for these grubs. Trees six inches through are often destroyed by them before the fruit grower suspects their presence. Examine the trunk up to two feet above the ground, and also remove the dirt for a few inches around the collar, and with the back of your knife scrape the bark, removing the scarf. This will disclose the condition of the bark. If healthy, you are assured of the fact, and have no more solicitude until next season. If sawdust is visible, or any part of the bark seems dead, remove the decayed part with a sharp pointed knife. The borer leaves behind him a hole packed full of sawdust, and this is to be followed up with the knife, until you come upon the sinner taken in the very act. Put the sharp steel into him without any compunctions of conscience.

We have found it a good plan to keep ashes or lime around the collar of the tree. They are not only distasteful to the borer, but they aid the growth of the tree, and have a tendency to throw it into bearing. These and other insects are now so numerous, in the older States, that, if we have apples, we must give constant attention to the trees. This work can be done at any time before the ground closes up for the winter.

Inverted Trees.

So similar are the organs of roots and branches that, in many cases, they will thrive well if they are made to change places. Andrew Knight, the eminent physiologist of England, was the first to discover this. If we bend down a young plum or cherry tree, and bury the branches, (or a large portion of them,) in the earth, they will throw out roots, and the original roots being afterwards gradually detached, will send forth leaves, and in the course of time will produce flowers and fruit. Let some of the young orchardists whom we are training up, try this experiment, and report progress to us.

Superstition about the Ash Tree.

In the Highlands of Scotland, at the birth of a child, it is said that the nurse takes a branch of the ash tree, one end of which she puts into the fire, and while it is burning, receives into a spoon the sap which oozes from the other end: this she gives to the child to be mingled with its first blood. It is supposed to impart wonderful virtue.

In Kings county, Scotland, near Kenetry church is a famous Ash, the trunk of which is now twenty one feet ten inches in circumference. When a funeral of one of the peasantry passes by this tree, the procession pauses, the body is laid down for a few minutes, while all offer a few words of prayer. Then each person casts a stone to increase the heap which has been accumulated over its roots. This is imagined to benefit both the dead and the living.

There is an ancient saying that "a serpent would rather creep into the fire than over a twig of an ash-tree." Cowley, enumerating various prodigies, says:

> "On the wild Ash's top the bats and owls,
> With all night, ominous, and baleful fowls,
> Sate brooding, while the screeching of the doves
> Profaned and violated all the groves."

There, we have recorded superstition enough for one day. It is surprising how many of such follies will creep into men's minds. Let us avoid teaching them to our children.

What can be Done with the Gooseberry.

"What fruit is this?" has been frequently asked, as visitors to the *Agriculturist* office have examined jars in which some extraordinary specimens are preserved in alcohol, and exclamations of incredulity have often followed when we have replied "Gooseberries." "They look like mammoth plums" says one; "better call them *gander* berries" facetiously suggests another. To those who have seen only the common sorts generally grown, these berries are truly a marvel. They average over four and a half inches in circumference, and unlike many other fruits, the increased size is not at the expense of flavor. Those in our possession are not the largest grown in the neighborhood from which they were received, but were specimens *too small* to enter for competition at the Annual Gooseberry Exhibition held at Paterson, N. J., on the 16th of July.

We are indebted to Mr. Thomas Graves for the samples, and for the following notes on the Exhibition. A comparison with the weights of fruit exhibited previous years, and published in our last volume, shows that the berries are still improving. The report is as follows:

Name of Grower.	*Name of Berries.*	*Color.*	*oz.*	*pwts.*	*grs.*
H. Wilkinson	Speedwell	Red	*1	2	9
James Cocker	Conquering Hero	Red	*1	00	05
Isaac Cocker	Pilot	Yellow	*1	00	22
George Porrett	Paterson Seedling, Am.	Green	*0	13	07
H. Isherwood	Floria	White	*0	14	00
Jas. Cocker, jr.	Pilot	Yellow	†0	15	08
W. Scoweraft	Pilot	Yellow	†0	15	08
H. Wilkinson	Speedwell	Red	1	01	09
Isaac Cocker	Conquering Hero	Red		18	10
George Porrett	Passaic, Am. Seedling	Red		18	06
James Cocker	Useful	Red		17	10
H. Wilkinson	Slaughterman	Red		16	15
J. Fairclough	Lion	Red		16	00
J. Fairclough	Companion	Red		15	22
George Porrett	Maiden	Red		15	08
Isaac Cocker	Pilot	Yellow		19	22
Isaac Cocker	Leveler	Yellow		19	15
George Porrett	Railroad	Yellow		19	15
Isaac Cocker	Cathernier	Yellow		17	14
J. Fairclough	Creeping Jane	Yellow		16	00
James Cocker	Two to one.	Yellow		15	16
E. F. Garside	Drill	Yellow		14	20
George Porrett	Washington, A. seedling	Yellow		13	15
Isaac Cocker	Overall	Green		19	12
Isaac Cocker	Turnout	Green		18	20
Isaac Cocker	Thumper	Green		18	02
J. Fairclough	Green Wonderful	Green		17	16
J. Fairclough	Queen Victoria	Green		16	10
J. Fairclough	Scantling Green	Green		13	22
George Porrett	General	Green		09	00
George Porrett	Seedling	Green		10	17
J. Fairclough	White Lion	White		17	15
Isaac Cocker	London City	White		17	04
James Cocker	Cosick	White		16	14
Isaac Cocker	Garside White	White		16	07
J. Fairclough	Freedom	White		15	10
J. Fairclough	Antagonist	White		15	09
Isaac Cocker	Eagle	White		15	14
H. Wilkinson	Tally Ho	White		14	09

* Prizes awarded. † Maiden prizes awarded.

Mr. George Porrett exhibited a pair of twin berries weighing 1 oz. 17 pwts. 20 grs. Mr. Wilkinson's largest berry weighed 1 oz. 4 dwt., but being bursted, was not allowed in competition.

Those not designated in the above table as American Seedlings, were English sorts. The exhibition was largely attended, and gave great satisfaction. It will aid in bringing this excellent fruit into more general and deserved notice, to know what results can be obtained from painstaking in its cultivation.

American Pomological Society.

We give below the official announcement of the Eighth Session of the American Pomological Society, to be held at Philadelphia, beginning on the 11th day of this month. The design of the Society, and the objects to be accomplished, are so fully set forth in the announcement below, that nothing need be said on this. We will offer a suggestion to the members. This Society may do much for the promotion of fruit growing, as we doubt not it has already done. But it should take into consideration all classes of fruit, and sufficient time should be taken at the meeting to do justice to each department. Two or three days once in two years is not time enough. The meeting should remain in session nearly a week. Again, it is well known that several of the leading members of the Society are specially interested in pear culture, and owing to this fact, more than half of the time of the last meeting was devoted to this one fruit, and the discussion upon several other fruits was crowded into a few minutes each. We suggest that at the forthcoming meeting the Society first take up the smaller fruits, and go through with them thoroughly, following with grapes, apples, etc., and then devote what time remains to the discussion of pears and other specialties. In this way the Society will consult the interest of the great mass of the people. While we would not say one word against pear culture, but would desire to see this fruit much more generally grown, the small fruits, strawberries, raspberries, blackberries, currants, grapes, etc., are really the most important for three-fourths of all the cultivators in the country. As these have received comparatively little attention at former meetings of the Society, we hope they may come in for the first and most prominent place in the discussion at the Philadelphia meeting. If the Society shall do no more than to awaken such an interest in these fruits as to be the means of securing a plot of improved strawberries of the best kind, on twice as many farms and village plots as they are now found upon, it will have accomplished a vast amount of real good to the country.

The Eighth Session of this Institution will be held in the city of Philadelphia, commencing on the 11th of September, at 10 o'clock A. M, and will be continued for several days.

This Society, the first National Institution for the promotion of Pomological Science, was organized in the year 1848. Its sessions have brought together the most distinguished cultivators of our country; its transactions have embodied their various researches and ripest experience, and its Catalogue of Fruits has become the acknowledged standard of American Pomology.

Its example has created a general taste for this science, inspired pomologists with greater zeal, and called into existence many kindred associations. Its progress has been remarkable and gratifying, but it still has a great work to perform. Its general catalogue should, from time to time, be enlarged and perfected, and local catalogues formed, embracing the fruits adapted to each State and Territory of the Union. The last of these suggestions was made by the Chairman of the General Fruit Committee, at the seventh session of the Society, in the year 1858. This has been carefully considered, and is deemed worthy of special attention. It is, therefore, earnestly recommended that each State Pomological, Horticultural, or Agricultural Society, charge its Fruit Committee with the duty of collecting information, and presenting the same, with descriptive lists of Fruits adapted to their location.

The importance of this subject, and the increasing value of the fruit crop of the United States, call for a prompt and cordial response to this request,—for a careful preparation of said list, and for a full and able representation, at the approaching session, from all parts of the country.

The various State Committees of this Society are expected to submit accurate and full reports of the condition and progress of fruit culture within their limits, together with definite answers to each of the following questions. These reports, it is desirable, should be forwarded to the Chairman of the General Fruit Committee, Hon. SAMUEL WALKER, Roxbury, Mass., if possible, as early as the 1st of September, or to THOMAS W. FIELD, Esq., Secretary, Brooklyn, New-York.

What *six*, *twelve*, and *twenty* varieties of THE APPLE are best adapted to an orchard of *one hundred* trees, for family use,—and how many of each sort should it contain? What varieties, and how many of each, are best for an orchard of *one thousand* trees, designed to bear fruit for the market?

What *six* and *twelve* varieties of THE PEAR are best for family use on the Pear stock? What varieties on the Quince stock? What varieties, and how many of each of these are best adapted to a Pear orchard of *one hundred* or of *one thousand* trees?

Answers to these questions should be made from reliable experience, and with reference to the proximity or remoteness of the market.

Held, as this Convention will be, in a city easily accessible from all parts of the country, it is anticipated that the coming session will be one of the most useful the Society has ever held. Societies, therefore, in every State and Territory of the Union, and the Provinces of British America, are requested to send such number of delegates as they may choose to elect. Fruit-growers, Nurserymen, and all others interested in the art of Pomology, are invited to be present—to become members, and to take part in the deliberations of the Convention.

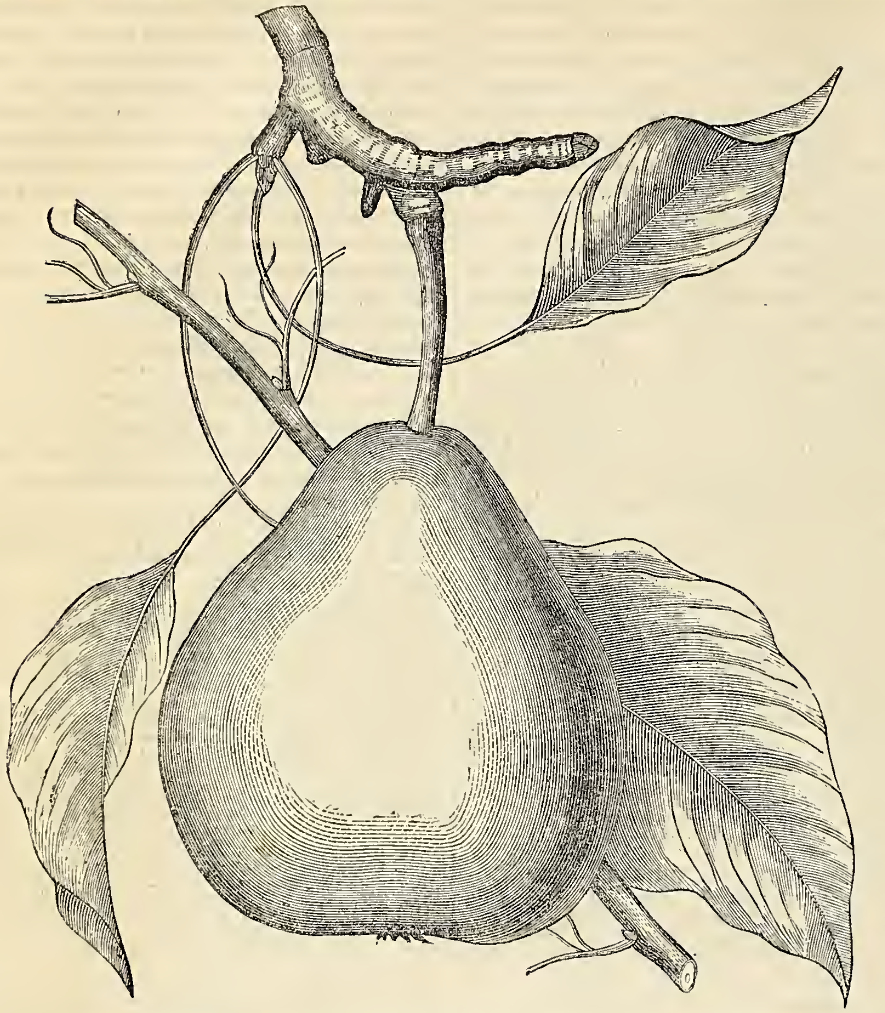
In order to increase as much as possible the interest of the occasion; members and delegates are requested to forward for EXHIBITION as large collections of fruit as practicable, including specimens of all the rare and valuable varieties grown in their respective districts, and esteemed worthy of notice; also, papers descriptive of their mode of cultivation—of diseases and insects injurious to vegetation—of remedies for the same, and to communicate whatever may aid in promoting the objects of the meeting. Each contributor is requested to make out a complete list of his contributions, and present the same with his fruits, that a report of all the varieties entered, may be submitted to the meeting as soon as practicable after its organization.

Societies will please transmit to the Secretary, at an early day, a list of the delegates they have appointed.

Gentlemen desirous of becoming members, can remit the admission fee to THOMAS P. JAMES, Esq., Treasurer, Philadelphia, who will furnish them with the Transactions of the Society. Life Membership, twenty dollars; Biennial, two dollars.

Packages of fruit may be addressed to THOS. P. JAMES 630 Market-street, Philadelphia.

MARSHALL P. WILDER, President, Boston, Mass
THOMAS W. FIELD, Secretary, Brooklyn, N. Y.



Beurre Superfin Pear.

This is one of the really fine pears, the merits of which have not been sufficiently set forth in fruit books and periodicals. We have no hesitation in saying that, when better known, it will take a high rank among the rapidly increasing number of good pears. At the last meeting of the American Pomological Society it was highly eulogized, and, after a full expression of sentiment, unanimously recommended for "General Cultivation," both on the pear and quince stock. The President, Mr. Wilder, says "I have had it under cultivation for ten years, and have no hesitation in saying that it is one of the best in the catalogue. There may be an equal, but there can be no superior." Mr. Barry, remarked that it was an "excellent grower and great bearer; the fruit is of great size. When it is generally known it will be pronounced everywhere one of the finest pears under cultivation. It grows very well on the quince stock."

The fruit may be described as oblate-pyriform, medium to large, with a yellowish skin partially covered with russet, thickly sprinkled with fine dots, and shaded with crimson upon the sunny side. Stalk strong, nearly one inch in length; calyx closed, set in a narrow basin; flesh very juicy, buttery and melting, with a sprightly subacid, vinous flavor. Ripens during October and November, and remains longer in an eating state than most other varieties, which is one of its strong recommendations. Our engraving, above, was made from a medium sized specimen, but gives a very correct representation of its general appearance. It may also be added that the tree is a good grower, of a beautiful appearance, healthy, and an abundant and constant bearer. It is of French origin, being a seedling of M. Goubalt, upon his grounds at Angers, and has thus far proved perfectly hardy in this country. We are desirous to see it more extensively planted.

Tree Mignonette.

Many suppose that this deliciously scented flower is essentially and necessarily an annual. But it may be made a perennial. Having started the plant from seed, as usual, give it during the summer plenty of light and heat to make it grow robust and stocky, train it upright by tying the central stalk to a stake, take off the lower branches, and pick off the flowers as soon as they mature, allowing none to go to seed. By the month of September, you will have quite a strong, bushy plant. Near the middle of this month, take it up with a ball of earth around the roots, pot it, and remove to the green-house or parlor window. It will now become a perennial shrub.

New and Valuable Plants.

The principal novelties for the flower garden the present season have been the various Tritomas, the Farfugium grande, and the celebrated Japan Pinks. Next year, not the least noticeable will be the new Pyrethrums. A pink variety, the *roseum*, has been cultivated in this country for a few years, but being nearly a single flower, has not attracted much attention. From the notices which now reach us, we judge that great improvements have been made upon it by the German and French hybridizers. Ten new sorts are mentioned, which, if not fully double like the old white, have the great excellence of being *perfectly hardy.* We give the descriptions substantially as we find them:

Atrosanguineum: nearly two feet high, foliage dark green, flowers upwards of two inches in diameter, rays violet crimson with a yellow disc.

Duchess de Brabant: dwarf and compact in growth, a foot or so high, flowers nearly *four inches in diameter,* [can this be so?] the rays rosy crimson, with bright yellow disc.

Charles Baltet: large plant, handsome foliage, flower-heads large, semi-double, four inches across, the central florets short and rose-colored, and the outer rays carmine.

Several others are said to be equally attractive, the names of which are as follows: Pyrethrum roseum nanum, white, tinted with pink; P. Delhayii, crimson; P. Tom Pouce, P. Gloire de Mayence, P. Milleri, purplish rose, P. Ambrose Verschaffelt, P. Theophile Massarl, P. Parthenium, flore pleno.

Out of so many jaw-breaking names, some good things ought to come. Let us watch for them. While our pen is in, we will record another Pink from Russia, which is on its way to our gardens. It is after the style of the famous Heddewiggii, from Japan. Its name is Dianthus Verschaffettii. And what a name! The description as given by the Messrs. Henderson, of England, is in quite high-toned rhetoric: "The flowers, in their general aspect of growth, resemble a large specimen of the florist's varieties of pinks, as grown for competition, but differ in showing a single expansion of flower-lobes rather than of double petal series, and each entire blossom being from two to three inches in diameter; while the entire series of petals, instead of all combining to form a single blossom with the usual dark ray or center, as is the case in the varieties above quoted, in the present example range themselves into a series of colored spots at the base, converging to a crimson belt or zone, and together forming a large aggregate cluster or flower-head. The arrangement of these concentric series of picturesque petal rays within one simple base or crown, forms one of the most novel and singular combinations yet known in gardens, etc., etc." This is all very grand, but when we buy *our* specimen, we shall beg to take it without the description!

Sport of a Rose.

In a late number of the Gardeners' Chronicle, (Eng.) there is an account of a remarkable sport of the Rose. A Devoniensis was budded upon a white Banksia, and from the bud issued, in connection with the regular Devoniensis branch, a shoot which was neither Banksia nor Devoniensis, but partook somewhat of the character of both, with a Tea scent. The writer goes on to remark of the change the Banksian stock often produces upon the different varieties worked upon it, well known to practical rose growers. The sap of one variety was mingled with that of the other, and a shoot starting out at that particular point gave the sport in question. A change of this kind is also noticed in working the purple Cytisus upon a Laburnum, which gives the changeable Cytisus *Adami.*

When is a vine like a hog? when it begins to root. When is it like a soldier? when it begins to shoot. When is it like a coward? when it begins to run. What will hold it to its place? ten drills (tendrils.)

The man who wedded an opinion, found himself married to a one-eyed dear (one idea).

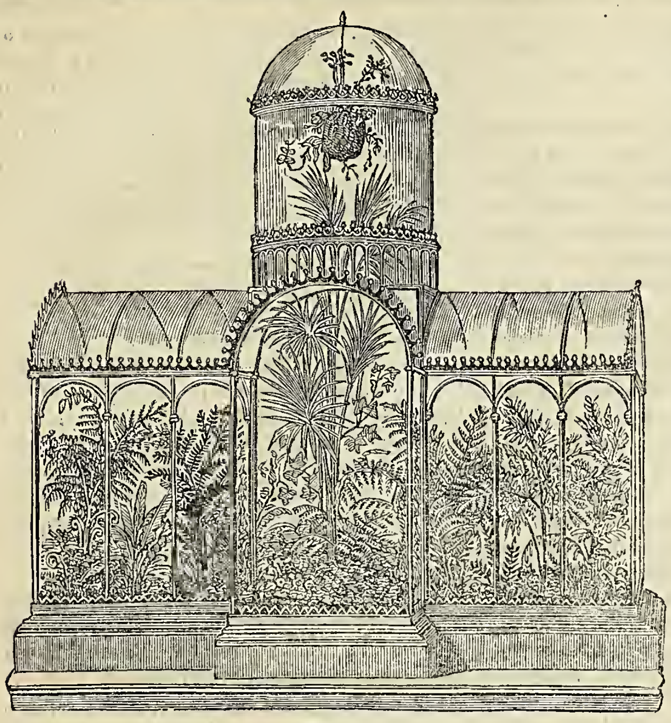


Fig. 1.

Wardian Cases, or Parlor Conservatories.

Now that the season is approaching when all lovers of flowers will be forming plans for decorating their houses in Winter with plants, we think we can serve our readers no better than by a few words about Ward Cases. "Ward Cases!" And what are they? inquire some of our readers. They are small glass cases for growing plants in rooms.

All persons who have tried to cultivate plants in their stove and furnace heated dwellings, know full well how difficult it is to grow them with perfect success. Often the leaves dry up, or turn yellow and fall off; whatever growth is made, is apt to be weak and spindling, the leaves become coated with dust, insects abound, and blossoms are few and far between. To one who delights to see vegetation in its perfectly healthy state, the result is far from satisfactory.

Many methods have been devised to obviate these difficulties, as frequent sprinkling of the plants, sponging the foliage, fumigating to kill the insects, etc., but these devices furnish only a partial remedy. The tobacco smoke sets my lady into a terrible fit of coughing, and the sprinkling hurts her carpet and window curtains and wall paper; and then, after all the trouble, the plants don't thrive as well as could be desired.

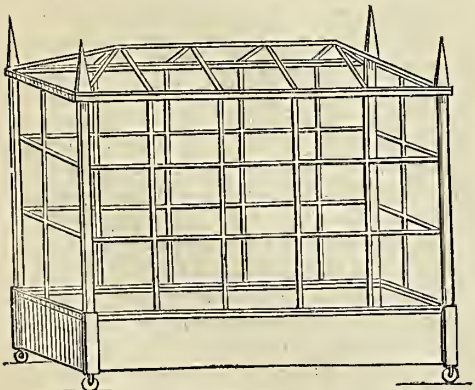


Fig. 2.

By a seeming accident, a plan was discovered several years ago, by which nearly all of these evils can be remedied. Mr. N. B. Ward, an amateur cultivator in London, having placed the chrysalis of a sphinx in a large bottle, together with a little moist soil and a tiny plant for the insect to feed on, the insect on which he wished to experiment died, but the plant grew, and in such perfection of health and beauty, that Mr. Ward was led to inquire whether a larger plant might not grow in a larger bottle or covered vase. The experiment succeeded perfectly. From this, he proceded to make a glass box or case, or miniature conservatory, six feet long and four feet high and wide, and this he filled with plants. Nor was he any the less successful, though he found that all plants did not flourish with equal health.

A simple form of the Wardian Case may be seen in Fig. 2. The cases may be made in a very plain and cheap style like this, or in more expensive ones, like the other sketches here given. One made after the pattern (fig. 2), may be constructed as follows: Let its length be equal to the width of the window before which you intend to place it. Make a wooden box for the bottom, like a common sink, about six inches deep, and line it with zinc. It should have a hole in the floor, with a plug in it, to drain off surplus water. At each corner of this box, an upright post two inches square is framed in, with similar pieces supported by them at the top, thus making a square frame. The sides and roof, made like common window sash, are then fitted into this frame. A small section of the roof, also of the sides, is made to open for ventilation, and for putting in and taking out plants. The frame is to be well painted inside and out. The corner posts are fitted at the bottom with heavy castors, for convenience in moving the case about the room. The box should be raised above the floor high enough to allow the light from the window to fall upon the soil in the pots.

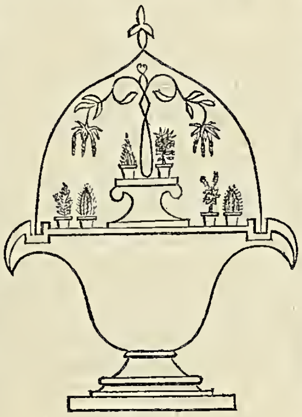


Fig. 3.

Any carpenter can make such a conservatory. So too, one can go further if he choose, and make it an elegant article of furniture. He may have a little Crystal Palace within doors. He may fit up the sides with shelves, and suspend baskets on wires from the roof for growing orchids and various trailing plants. He may divide it into separate apartments, for different kinds of plants. Fig. 1 will very well illustrate our ideas. The Dwarf Palm (*Chamærops humilis*) from Southern Europe, has the post of honor in the center, with a trailing plant in the wire basket hanging from the dome. The wings may be filled with ferns and lycopods, and other plants of which we will soon speak. The ferns and lycopods succeed admirably in Ward Cases, but other plants do very well. Among those which seem very much at home, we mention: Azalea ovata, Cereus crenatus, Abelia floribunda, Statice Wildenovii, Alona corlestis, Anemone nemorosa, Dentaria bulbifaria, Achimines longiflora, Cypripedium insigne, Stanhopea grandiflora, Dendrobium speciosum, D. cupreum, and others. Besides these which are specially adapted to the cases, the more common house-plants can be grown in them, if a little more care is given to ventilation and avoiding excess of moisture. Geraniums, roses, verbenas, petunias, camellias, fuchsias, and so on, grow in these cases in a perfection of beauty unknown elsewhere.

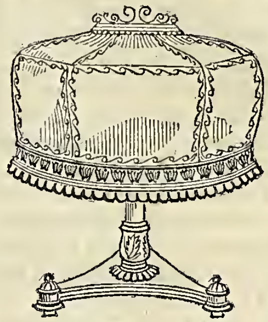


Fig. 4.

The inexperienced cultivator will, at first, be troubled with the dew settling on the inside of the glass and obscuring the view of the plants. To prevent this, the room should be kept at a uniform temperature, and to obviate it when it happens, open the door of the case until the air within becomes heated like that of the parlor. If the plants are well watered when they are put into the case, they will not need watering again for many weeks, nor even months, unless the door is often opened. The moisture which evaporates, is returned again to the soil.

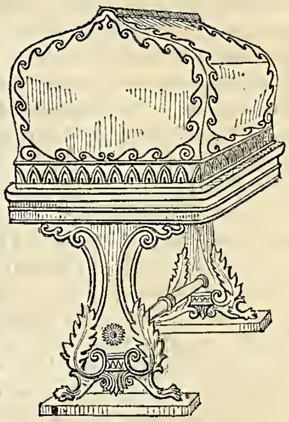


Fig. 5.

A very happy application of this principle has been made in the manufacture of ladies' plant cases for the parlor or bedroom. These are simply a stand made in the form of a vase, if you please, and covered with a large bell glass fitted into a groove on the upper rim of the vase. The Figs. 3, 4 and 5, taken from an English work, McIntosh's "Book of the Garden," will explain what we mean. Some of these, we presume, might be obtained at the stores in our principal cities.

The whole matter is now before our readers, so far as it is needful for their present information. With a small and cheap case, made by any one handy with a few tools, many experiments might easily be tried the coming Winter; and we feel sure they would afford great satisfaction.

Neat Window Curtains.

To the Editor of the American Agriculturist.

Is there any necesity to have things ugly because they must needs be cheap? Now in the matter of *window curtains* I am sure our country cousins only need a hint or two on the subject to bring about an entire change in the domestic economy of their *hangings*.

Must they be calico? then let the pattern be a small stripe of a faint brown or other neutral color; now get two or three yards of a calico with six or eight bright stripes in the breadth; cut out these stripes—dont undertake to tear them—and sew them on to the front edges and ends of the curtains. Take a narrow strip of wood—a lath will answer if it be long enough—and tack one end of the curtain to it, then nail this above the window frame. Now make some bands of the strips, with which to loop up the curtains, and you will produce a much prettier effect than by nailing to your windows a bright calico with a large flowery pattern which every fold distorts.

A very pretty simple cornice may be made for lace or muslin curtains by pasting gilt paper on a lath, then nail the curtain on the back of the wood, and allow it to fall *over* the gilt.

Plain net curtains—even white mosquito-netting would answer—with the edges hemmed over a strip of bright-colored lining muslin about three inches wide, look very tasty. A band of the colored muslin should be covered with netting to go across the top of the window, and to loop up the sides. Then those window-shades—those landscapes with the brown woman under a burnt sienna parasol, coming out of a yellow ochre Summer-house o'ershadowed by Indian red foliage, to meet a raw-umber man in a vandyke-brown boat on a burnt-umber lake—need we have those ! May we not have neat, plain white or buff shades to refresh us? If they will do all this, I will tell them how to make a mosquito net that shall rid the room of flies; having made one and tried it, I will answer for its entire efficacy.

Take that old torn mosquito netting off the frame in the window, and around the outside of said frame drive some tacks about one inch apart; let the spaces between the nails be uniform; then get a spool of very coarse *black* thread, make the end fast to one of the corner tacks, cross the thread to the opposite nail, pass it over two tacks, then back again and so on until you have taken it across both the short and long way of the frame, then cross it diagonally.

Put this in your window at early morning and towards evening, and the flies will go out through it; should one or two find their way in, they will go out again. *But*—there must be no light behind the frame—no window at the back, nor any white or light material; *it must look black from the outside;* that is the secret of its success.

Do you like to have the flies making free with your features—particularly the nose—in the morning when you want to sleep? I don't mean when it is time to get up, of course, I mean an hour or two before that. I arranged my frame in my bedroom window last night, and oh! how gloriously I slept until the "first bell" did what otherwise the flies would have done.

Brooklyn, N. Y. AUNT SUE.

How a Quiet Woman Conquered.

A friend who is noted for his *naturally* headstrong disposition, which impels him to "have his own way," has a most quiet and amiable companion, who governs him absolutely, and with the least possible jarring or discord. Being on very intimate terms with him, we asked him how it happened that his wife held such complete control over him that she generally had her own way. "Oh," said he, "that is the easiest thing in the world; when any difference of opinion arises, she expresses her sentiments calmly, and when, as usual, I insist that my way is right, she gives it up at once, simply saying—or looking when she does not say it—'Well have your own way and you will live the longer.' Of course I am not so mulish as to always take my own way when it is so readily conceded, and so we get on very pleasantly. I think I choose her way most of the time."—Apropos to this, we must tell a story that has been in the *Agriculturist* drawer for some time past. We give it in the narrator's own words:

"I never undertook but once, said Tim, to set at naught the authority of my wife.—You know her way—cool, quiet, but determined as ever grew. Just after we were married, and all was nice and cozy, she got me into the habit of doing all the churning. She finished breakfast before me one morning, and slipping away from the table, she filled the churn with cream, and set it down just where I couldn't help seeing what was wanted. So I took hold readily enough, and churned till the butter came. She didn't thank me, but looked so nice and sweet about it, that I felt well paid.

Well, when the next churning day came along, she did the same thing, and I followed suit and fetched the butter. Again and again it was done just so, and I was regularly set at it every time. Not a word said, you know, of course. Well, by and by this began to be rather irksome. I wanted she should just ask me, but she never did, and I wouldn't say anything about it to save my life. So on we went. At last I made a resolve that I would not churn another time until she asked me. Churning day came, and when my breakfast—she always got nice breakfasts—when that was swallowed, there stood the churn. I got up, and standing for a few minutes, just to give her a chance, I put on my hat and walked out of doors! I stopped in the yard to give her time to call me, but never a word said she, and so with a palpitating heart I moved on. I went down town, and my foot was as restless as was that of Noah's dove. I felt as if I had done a wrong. I did not exactly feel how—but there was an indescribable sensation of guilt resting on me all the forenoon.

It seemed as if dinner would never come, and as for going home one minute before dinner, I would as soon have cut my ears off. So I went fretting and moping around till dinner hour came. Home I went, feeling very much as a criminal must, when the jury is out, having in their hands his destiny—life or death. I couldn't make up my mind exactly how she would meet me—but some kind of a storm I expected. Will you believe it—she even greeted me with a smile—never had a better dinner for me than on that day; but there stood the churn just where I left it. Not a word was said; I felt confoundedly cut, and every mouthful of that dinner seemed as if it would choke me. She didn't pay any regard to it, however, but went on just exactly as if nothing had happened. Before dinner was over, I had again resolved, and shoving back my chair, I marched to the churn and went at it, just in the old way! Splash, dip, rattle—I kept it up. As if in spite, the butter was never so long in coming! I suppose the cream standing so long had got warm, and so I redoubled my efforts.

Obstinate butter! the afternoon wore away while I was churning. I paused at last from real exhaustion, when she spoke for the first time.

"Come, Tim, my dear, you have rattled that buttermilk long enough—is it for fun you are doing it?"

I knew how it was in a flash! She had brought the butter in the forenoon, and left the buttermilk for me to exercise with! I never set up for myself in household matters after that."

TO FIX PENCIL DRAWINGS.—Sketches or manuscript made with a lead pencil may be fixed, so as not to rub off, by coating the surface with a thin solution of gum arabic in water. A foreign journal recommends to make a weak solution o isinglass in a wide shallow vessel, say a baking tin, and then draw the sheet of paper through it quickly, so that every part of it shall be touched with the fluid. Drain off the fluid, and let the paper dry. If it wrinkles, place it between sheets of clean paper and run a warm flat-iron over it. Either the isinglass or the gum arabic will fix the pencil marks.

What a time I had with the Bugs.

To the Editor of the American Agriculturist.

You say in the June No. of the *Agriculturist*, "there is scarcely a more provoking pest of the household than the moth." What do you say of bed-bugs? I suppose it is not polite to introduce such a subject, and, three months ago, if any one had mentioned the creatures in my house, I should have set him or her down for an ill-bred, neglectful slattern for knowing anything about them. "Bugs, indeed! no tidy housekeeper was ever troubled with the pest—they never darkened the sunshine of *my* house"—such would have been my thoughts. Alas! pride must have a fall, and mine has experienced a severe one.

I was as happy a housekeeper, as comfortable circumstances, a contented disposition, an indulgent husband, good children, and a well kept house, could make me; but my time of trial came at length in this wise:

"See what a bargain I have brought you," said my good man triumphantly, one day, as a cartman deposited at the door a handsomely finished bedstead, just purchased at auction for five dollars. I had always been prejudiced against second-hand furniture, believing the first wear of a thing the best, but this was of so neat a pattern, and so very cheap, I could not but commend the purchase. It was forthwith placed in the children's room, who rejoiced greatly in the change from the narrow bedstead they had outgrown, and they inaugurated the change with a high frolic when they first took possession of its ample accommodations. I had noticed some suspicious looking specks about the joints, but took the precaution of giving the pieces a thorough washing, and thought no more of the matter. About a week after this, I was one morning alarmed by a singular eruption appearing upon the arms and necks of the children. I thought first of mosquito bites, but it was too early in the season—it could not be fleas, nor measles, what could it be? That evening the mystery was solved. Shortly after the children had retired to their room, I heard little Mary exclaim, "O sister! see this dear, little, tiny *turtle*, running all round on my pillow, where did he come from?" I went in hastily, and looked. Ugh! the bed was swarming with bugs! I removed the clothes, searched diligently through every hiding place, exterminated all I could find, put the children to bed, and then went to my own room, and *had a good crying spell.*

The next morning I proposed to split the vile bedstead and its contents into kindling wood, but husband objected. "I'll get you some of Lyon's powder," said he, "and you can soon rout them out." Unwilling to lose the price of the bedstead, I consented, and the infallible powder was speedily applied to every crack and crevice where a *varmint* could hide. There was no trouble that night, and I praised the powder that had brought relief. But the next day, as I sat sewing in the children's bedroom, I felt something upon my neck, and almost screamed as I laid my finger upon one of the execrable insects. Upon examination I found they had left the bed, apparently from dislike of the powder, and were secreted in the cracks of the floor and the wall. "Try Costar's exterminator," said my husband, when I reported the progress the bugs had made. We did try "Costar's"—apparently a mixture of turpentine and some other ingredients. If we could get a drop upon them, the bugs were killed, otherwise, they still bade us defiance. Next a man invented a bellows that was to puff his preparation into the cracks and upon the insects. We tried that, but they cared little for puffs.

"We'll suffocate them," said I. A roll of sulphur was procured, placed in a secure vessel, set on fire in the room, and the doors and windows closed tightly. It took more than a week to get rid of the smell of sulphur, but the bugs were not to be smoked out.

Finally, I have hit it. With sixpence worth of corrosive sublimate dissolved in rum or whisky, I went carefully over and into every lurking place of the pests, applying it pretty liberally with the feather end of a quill, and after repeating the dose a few times at intervals of two or three weeks, I have conquered a peace, and happiness has returned to our dwelling.

Conclusion—Don't buy second-hand bedsteads. If bugs trouble you, try my remedy. MARTHA.

Are Potatoes Wholesome Food?

A subscriber sends for this journal (*the Agriculturist*,) a long essay, in which he attempts to prove that potatoes are an unwholesome article of food. Many of the reasons given, would apply to most other kinds of food, and we do not see how the writer, if he believes all he writes, can avoid following the advice of the colored man at Charleston during the prevalence of the cholera. After condemning various articles of food as dangerous, to the direct question, "What shall I eat then?" he replied: "Why de best way is to eat noffin' at all, and den you no 'spose yerself." In regard to potatoes, there is no doubt that good, mealy potatoes, cooked through, are as healthful as any article of food consumed. They abound in starch, and do not, alone, furnish muscle-making material enough. They may be eaten more freely in cold weather when carbonaceous, or heat-producing food is most required; with a due quantity of lean meat, bread, cabbage, and other nitrogenous kinds of food, they are always good. But to be easily digested, they should always be baked or boiled dry, and mashed. The mashing is not essential for adults who have good molar teeth or grinders, and who *will* take time in eating, to masticate them well. Children, and careless or rapid eaters, are likely to swallow unmashed potatoes in small lumps. These lumps are dissolved slowly, and irritate the stomach, producing a dull heavy feeling, if not absolute pain. The fact that bits of potatoes are vomited whole, or passed off in the excrements, when there is any irritation of the stomach or bowels, is proof that such lumps should never go into the stomach.

Potatoes should not be mixed with butter or gravies in mashing, as such a compound is not easily dissolved by the gastric juice. A better plan is to mash them dry, or with a little milk, and let whatever salt and butter, or gravy, is used, be put upon the outside of each mouthful. (This remark applies to all kinds of food.) The butter, gravies, spices, etc., applied to food, are designed to come in contact with the salivary glands, and promote a flow of saliva, and this end is better secured by putting these substances upon the outside of food.

A dry, mealy potato, baked or boiled through, and mashed finely so that it would dissolve in water stirred up with it, is just as good a food, for a sick person even, as boiled rice. We repeat that sick or well persons, young or old, should never swallow a piece of potato larger than a small pea; and to ensure this, we advise, as a general rule, to mash potatoes before bringing them to the table. We agree with our correspondent, that every potato having a black spot or lump in it, is diseased, and the whole potato should be unceremoniously rejected. There is no saving in consuming any part of such a potato. Mere cracks or openings in large potatoes, if unsurrounded with dark-colored hard matter, are not indicative of disease.

To Restore Luster to Silk.

Every lady knows that black silk often loses its luster and looks *old*, long before it is worn out. It is a pity to lay it aside, yet it is not pleasant to wear, for glossiness is one of the beauties that makes silk more desirable than other fabrics; even bright new calico looks better than lusterless faded silk. We recently saw a silk dress which had been worn a long time, restored so as to look "almost as good as new," by a very simple process, a description of which we procured for the *Agriculturist*. Take two raw potatoes of ordinary size, pare them, and remove the core if they are hollow. Slice them into a half pint of cold water, and leave them over night. The next morning, sponge the silk with the water, not wetting it too freely; then iron it, and its appearance will be greatly improved.

The Editor with his Young Readers.

BE YOURSELF.

How would this world appear if all the animals and plants of a species were exactly alike? Suppose, for instance, the horses all to be bay, the cows and oxen red, the dogs black, the birds with feathers precisely similar; all trees to be of equal size, and to have the same number of branches, and the flowers to be made after but one pattern. You can easily perceive there would be great regularity, but very little beauty. We should soon tire of seeing the same forms day by day. Now, we continually find pleasure in the garden, the fields, or the woods, for each time we visit them, the scene is changed. Flowers of different hues are coming out or fading away; the grass springs up, ripens, and is cut down, giving continual variety; and in the woods, where no two trees are alike, we may sit for hours without being tired of observing their different and beautiful forms.

This endless diversity of appearance is one reason why the country is so much more pleasant than the town. Here, we have street after street of houses built on almost the same plan. The staring red brick walls, and uniform level pavements, meet the eye day by day, until it is a relief to see a falling wall or a street torn up for repairs, and it gives a real treat to escape into the country for a change of objects.

In the same manner the world is far happier because men are not alike. Each individual has his own peculiar nature and character, differing in some points from every other individual. Perhaps your brother is delighted with nothing so much as whittling, making wind mills, weather vanes, and traps and notions of all sorts, while you are more amused with drawing pictures, or reading. He may be quick tempered, and you, very good natured. He may be very generous, while you are, perhaps, inclined to be selfish. And so you will find no two persons just alike in disposition, any more than in outward appearance.

Now it is very certain the Creator intended this to be so, and for very good reasons which we will not now give, though they are very plain, but only remark that this arrangement shows His wonderful power—every man, as well as every animal and plant, is a separate and distinct invention, like its fellows in general character, but greatly different in minor points. It is as if a man should make a countless number of clocks, all contrived to keep time correctly, all having the same number of wheels, yet no two containing the same arrangement of machinery. You see how much more skill this would require than to make any number after exactly the same pattern. But we leave this part of the subject for you to think of. It will be a good theme for a school composition, to give the reasons why we are made so to differ.

The great object of this chat is to show you the absurdity of always doing "as other folks do," trying to be somebody else, instead of being yourself. If John Stokes swears, chews tobacco, or smokes, that is no good reason for your doing so. He may be like a poor neglected apple tree in the fence corner, that has never been cultivated and pruned, and taught to bear good fruit. You are growing up in the home garden, and should blossom with promise of correct habits. If Susan Tompkins wears two feathers in her bonnet, don't be unhappy because you have none. Perhaps they become her, or her parents can afford it, or twenty reasons may exist that would not suit your case any more than a sun-flower would fit a morning-glory vine.

Here is the rule—*Think, and act, as is right in your own circumstances, and follow no one's bad example.*

ANSWERS TO PROBLEMS.

No. 21—*Original Rebus.* Tie man D tied weight four no man: or "Time and tide wait for no man."

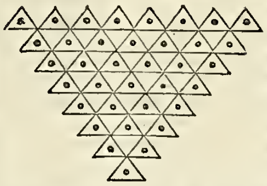
No. 22—*Word Rebus.* The grate being empty, a man put coal on.

No. 23—*Enigma.* All who have sent in an answer, agree that it is "Something," which we suppose is correct.

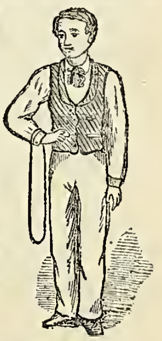
To save repetition of names, we annex to each the number of the problem solved correctly. "Nundao," 18, 19; B. Heritage, 20; Charles L. Hampden, 21; Edward Tatnall jr., 21, 22, 23; A. A. Stevenson, 21; S. Henry Ward, 21, 22; Hannah E. Bartley, 21, 22, 23; H. H. Vaughan, 21; Harry Brackley, 22, 23; Heith L. Dacre, 22, 23; B. F. Wallis, 22; D. A. Wagner, 23; "Whitestone," 23; (says the enigma was written by Dr. Byles of England.)

NEW PROBLEMS.

No. 24—*Puzzle.* Arrange the *dots* as seen in the figure, eight in the first row, seven in the second, etc., and enclose them with a line without taking off the pencil, and without passing over the same space more than once. It can be done very easily if you are careful to turn at the right corners.



No. 25—*String Puzzle.* This is for the boys, and will be quite amusing to those who have never seen it performed. Take off the coat; tie the ends of a string together and hang it upon the arm, and place the hand in the vest pocket, as shown in the figure. The puzzle is to remove the string without untying it; the hand to be kept in the vest pocket, and the string not to be put around the hand in the pocket. It will require some ingenuity for you to write out an intelligible description of the manner of performing this operation, as well as some contriving to find out how to do it.



No. 26—*Enigma* contributed by "Whitestone."

"Before creating, Nature will'd
That atoms into forms should jar,
By me the boundless space was filled,
On me was built the first-made star.

"For me the saint will break his word,
By the proud atheist I'm rever'd;
At me the coward draws his sword,
And by the hero I am fear'd.

"Scorn'd by the meek and humble mind,
Yet often by the vain possess'd;
Heard by the deaf, seen by the blind,
And to the troubled conscience rest.

"Than Wisdom's sacred self I'm wiser,
And yet by every blockhead known;
I'm freely given by the miser,
Kept by the prodigal alone.

"As Vice deform'd, as Virtue fair,
The courtier's loss, the patriot's gains;
The poet's purse, the coxcomb's care;
Guess—and you'll have me for your pains.

A Wisconsin paper says: "There is not a single person in our county jail." How many married ones are there?

You have a splendid *ear*, but a very poor *voice*, said the organ grinder to the donkey.

UNCLE PETER'S STORY.

'Uncle Peter,' as we used to call him, was the greatest favorite in the village, especially with the children. He was not handsome, his face was wrinkled, his hair white and thin, he was very lame, one leg being shorter than the other, so that he had to use a crutch. But then he was so pleasant, and had so many stories to tell about his boyhood days, and the scenes he had witnessed in his long and eventful life, that there was no place the girls and boys used to love to visit better than Uncle Peter's cottage. It was in a pleasant spot just on the edge of a wood where the children used often to play, and very frequently Uncle Peter would take his seat on the bench outside his door to watch their sports. One day, a company of girls and boys were having a merry game in the woods, when suddenly a shriek was heard, and the whole company came running *pell mell*, toward Uncle Peter as fast as their legs could carry them.

"Hoity, toity!" cried the old man who was sitting in his favorite place, "What's all this about? who's hurt?"

"A bear! a bear!" cried one of the girls, as soon as she could get her breath; and then all began shouting and talking together, so that Uncle Peter said, "for the life of him, he could make neither head nor tail of the matter."

Just then, George Saunders, a merry but mischievous boy, came running from the woods, laughing and shouting at the top of his voice. "Ha! ha! That was a good one." The rascal had gone into Uncle Peter's barn, and taken a buffalo skin which he found there, and after wrapping himself in it, had slily crept around through the woods to where the children were playing, and suddenly sprang out, causing their fright.

Uncle Peter gave George a pretty severe lecture for the trick, telling him that it was dangerous sport to frighten any one, that persons had been made insane, and even lost their lives by such thoughtless sport. He also gave the children some very good advice about being alarmed before they knew there was any danger. Then seeing them all look rather serious he said, "Once you might well have been afraid of bears in the woods, though they have all been driven away hundreds of miles from here, many years ago. I have good reason to remember them, as you can see by my lame leg.'

"Do tell us about it," cried the children, gathering around him, and the old man related the following.

"When my father first came to this place, there was no other house within ten miles of us. It was almost an unbroken forest. We had no such comfortable house as you see now-a-days, but lived in a cabin made of rough logs, piled up just as you make a cob-house. Though we did not often see the face of white people, we had plenty of company. The Indians very often came into the neighborhood, as it was on a part of their favorite hunting ground. They were quite friendly, and we were pleased with their visits. But there were other visitors not quite so welcome. Wolves, wild cats, and bears were very plenty, and my father had many a fine calf and young pig carried off by the black shaggy rascals. One day in Autumn when I was about fifteen years old, I was husking corn in the field which we had cleared a few years before, when I heard a rustling and crackling among the dry stalks at a little distance. I supposed it to be one of the hired men, and called out, when there was a sudden rush as of some one running away. This excited my curiosity, and I pursued and soon saw a large she bear with two young cubs, scampering for the woods. Away they went, piling over the fence, and I after them, for I was too much excited to think of danger. In getting over the fence, one of the cubs stepped upon a loose rail which gave way, and down he rolled, bringing part of the fence upon him, at which he raised a great cry. The old one came rushing back, and spying me, made after me, at the top of her speed, with a terrible growl. It was now my turn to get out of the way, and I started for the house, shouting for father, with the bear in full chase. There was a steep shelving bank at the foot of which ran a brook, which I must cross to reach the house. Just as I came to this spot, the bear was not more than twenty feet behind me. I gave a desperate leap toward the brook, my foot slipped, and down I fell, bending my leg under me breaking it at the thigh, and there I lay. But at that instant, crack! went a rifle, and the bear came tumbling and rolling down by my side, with a bullet through her brain. My father had heard me call, and arrived just in time to see me fall, and the bear coming on the top of the bank

My life was saved, but my leg was spoiled, for it was not until the next day that a doctor could be found to set it, and it was impossible to bring it to its right place; so I have had to go hobbling through life ever since." "But children," added Uncle Peter, "I've found out that a man can be happy with only one leg if he will do right, be contented, and try to make others happy.'"

"MAKE THE BEST OF IT."

"Oh, Georgy Hays, just look here!" said little Madge Morrell. "The old gray cat just jumped through this window, and broke cousin Alice's beautiful rose geranium. Oh, isn't it too bad! How angry Alice will be."

"My sister don't get angry at such things, Miss Madge, I never saw her angry but once in my life, and that was when some boys worried a poor little kitten almost to death."

"But this is so very provoking, Georgy. Any body would be angry."

"It is really too bad, but you see if Alice does not try to make the best of it."

Pretty soon the young lady entered the room, her sunny face beaming with the bright spirit which reigned within. She was humming a sweet morning song, but she paused abruptly before her beautiful, ruined geranium.

"Ah, who has done this?" she exclaimed.

"That ugly old cat broke it, cousin Alice, I saw her, myself," said little Madge.

"Poor puss, she did not know what mischief she was doing. It was the very pet of all my flowers. But come, little cousin, don't look so long faced; we must try and make the best of it."

"I don't think there is much *best* to this, Alice."

"Oh yes, it is not nearly as bad as it might have been. The fine stalk is not injured, and it will soon send forth new shoots. This large broken branch will be lovely in bouquets. Let us arrange a little one for mother's room. We will place this cluster of scarlet blossoms in a wine glass, and you may run out into the garden and gather a few snow drops to put around it. There, was there ever any thing more beautiful. Now we will set the wine glass in this little saucer, and place some geranium leaves around the edge with a few snow drops mixed among them. Mother will admire it, she loves flowers so much. Now, little one, don't you think there is a bright side to this affair? I am not sure but pussy did us a favor by giving us so much pleasure from quite an unexpected source."

"I think you have found the bright side, Alice, though I am sure I never should. I almost wanted the old cat to be killed."

"Never be angry at a poor, unreasoning animal, my child. Cultivate a more noble, elevated disposition, and learn to control yourself even in the smallest matters that might disturb the quiet of your mind. It is only by such self-control that you can ever arrive at true woman-hood. Look for the bright side even of your disappointments and troubles. By such a course you will make for yourself a welcome everywhere, and your own happiness will be increased a thousand fold."

IRON WORTH MORE THAN GOLD.

If there were only one pound of gold, and one pound of iron in the world, and you had your choice of one of them, which would you take? You probably answer at once, "the gold." But would that be a wise choice? A pound of iron is really worth more than a pound of gold. The iron you could change to steel, and with this make needles, knives, scissors, and many other useful instruments which require a hard tough metal. Pure gold is a soft metal, and is adapted to very few purposes in the useful arts. It answers chiefly for making ornaments and for gilding. Because it is a scarce metal, the people of most countries have agreed to make it a standard of value. If gold were as abundant as iron, it would be cheaper than iron, for then no one would give a pound of iron for a pound of gold. Gold is not so valuable an article for exchange as it used to be. Eighteen hundred years ago, the exchange value of gold was at least ten times as great as it is now, for then there was much less of it. If gold was only used to exchange for wheat, then if there were only a million bushels of wheat, and just a million ounces of gold, a bushel of wheat might be exchanged for an ounce of gold. But if there were twenty million bushels of wheat, and a million ounces of gold, an ounce of gold would be exchanged for twenty bushels of wheat. When wheat is very plentiful, it takes more of it to buy a given amount of gold; just so when gold is very plentiful, it takes more of it to buy a given amount of wheat. So you see the world would not be any richer than now, if a hundred times as much gold were found as there is now. The only result would be, that it would take more gold to buy other things.

WORKING FOR A PENNY A DAY.

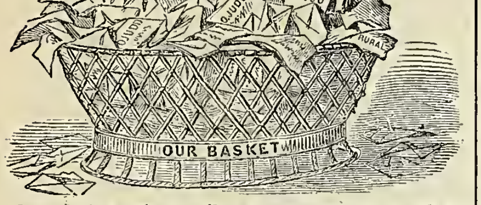
When in our boyhood we read in the Bible about the men working in a vineyard for a penny a day, we remember that it seemed like very small wages indeed. But let us see about this. In those days a penny was about as large as fifteen of our cents, and as money was some ten times as valuable as now, the penny a day was as good as 150 of our cents, so that those men really got as good wages as the best men now generally have in harvest time, that is a dollar and a half a day. So also when that good Samaritan gave two pence to the landlord to take care of the man who fell among thieves, you see it was equivalent to about $3, which would probably pay for his board two weeks in a country tavern, where board was very cheap. This gift of the Samaritan was in addition to the raiment, the oil and wine, and to the promise to pay any thing more that the landlord might expend. By the same reckoning, how much was that box of "very costly" ointment worth, which Mary used upon the Saviour? When the Disciples asked if they should buy 200 penny-worth of bread, how many loaves were they calculating for at about 6 cents a loaf—a large price in those days? Remember to reckon money worth ten times as much as now, and to call a penny worth 15 cents.

AN UNEXPECTED HUG.

The following, which is good enough to be true, is said to have happened "Out West." An organ grinder who was traveling through the country, accompanied by a tame bear, which he had trained to dance, stopped before a farmer's house late one afternoon, and after amusing the family with his performances, obtained permission to stay all night. The bear was placed in the barn for safe keeping. During the night, the family were alarmed by a terrible noise in the barn. Some one was screaming and shouting, "Murder! Help!" and apparently engaged in a struggle for life. The farmer hastened to the spot, followed by the organ grinder and other inmates of the house, and found the tame bear with a man in his embraces, hugging him tightly, while the poor fellow struggled frantically to escape. The bear was muzzled, and could do the man no serious injury, though he was far from comfortably situated. Upon examination, it proved to be a dishonest butcher, who had come to the barn to steal a fine calf. In the darkness he had stumbled over Bruin, who had seized him and held him fast. The organ grinder learning how matters stood, called out, "Hug him, Jack," and the bear, enjoying the sport, continued to squeeze him unmercifully, until the farmer thought he had been sufficiently punished, when he was released. The story soon spread abroad, and the butcher left the town to escape the ridicule to which it subjected him.

Premiums for Boys and Girls.

Our young friends will find in our Premium List for 1861, on another page, some things that will specially interest them. The most valuable are the Dictionary and Cyclopedia Premiums, though every premium offered is worth working for. A large number of boys and a few girls have each received a splendid copy of the large Dictionary, and two boys have each earned the Cyclopedia, (15 large volumes,) this year. Let all our enterprising boys and girls go to work and gather subscribers—they will thus not only benefit our circulation, and introduce a good paper into many new families, but they will also benefit themselves. The boys and girls of a neighborhood might join their efforts, and get a Cyclopedia to be owned in common, and kept at the school house. Read over the premium list, and see if you can not take hold now, (while the extra numbers are offered to new subscribers,) and earn one or more of the premiums. We expect to give away a lot of Dictionaries, Cyclopedias, etc., to boys and girls. Who will have one? Who will get the first, and who the second?



Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from whenever we have room left here.*

Preaching under the "Third Head."—An eccentric preacher once began his discourse thus: "My brethren, my sermon naturally divides itself under three heads. Under the First, I shall talk about things that you know, and I know. Under the Second head, I shall talk about things which I understand, but you do not. Under the third head I shall preach about certain things which you do not understand, nor I either." There is a good deal of preaching under the "third head" now-a-days, and quite as much out of the pulpit as in it. The temptation to this sort of preaching is quite strong among agricultural and horticultural editors, and as for that matter, among all editors, for they are sometimes at their wit's ends, to know how to respond to the many inquiries addressed to them, in such a way as to maintain a credit for knowing everything. We are daily losing our ambition to sustain such a credit, and so when we fail to promptly respond to certain difficult questions put to us by our readers, if they can find no better excuse for our silence, we hope they will attribute it to a reluctance on our part to "preach under the third head."

Experiment in feeding Swine.—"L. E. T." proposes that farmers who intend fattening a number of swine this season, should try the following experiment, and publish the results. Select four porkers of the same breed, age, and as near the same weight as may be. Confine them in separate pens—let each be weighed, and the weight recorded at the time of shutting up. Feed No. 1 with shelled corn; No. 2 with ground corn; No. 3 with whole boiled corn; No. 4 with cooked corn meal. Keep an exact account of the quantity fed, and the cost of cooking, extra labor, etc., and when the hogs are dressed, compare the results in weight and cost of pork. Such experiments have been made, here and there, over the country during past years; but our correspondent thinks if one hundred farmers could be induced to try it the same season, and communicate the facts to the public, it would so settle the question in favor of cooked food, that it would be generally adopted.

Seedling Mulberries.—Mr. Smith Tuttle, New-Haven Co., Conn., has exhibited at our office specimens of a seedling mulberry which is worthy the notice of nurserymen and amateurs. The fruit averages about an inch long, is of a deep black color, and possesses a fine, vinous, sub-acid flavor, which must make it a favorite for eating fresh and for cooking. Mr. T., says the tree is very hardy and thrifty, and yields abundantly, the season of fruiting commencing in June and extending to September. Two other sorts, one much resembling the common native, the other somewhat like the Black English were shown by Mr. T. Their flavor was, however, inferior to the sort first described.

Northern Muscadine Grape, etc.—P. Bloomstrand, Plymouth Co., Mass. This grape is too foxy for even northern culture. Better plant Concord, Hartford Prolific, Diana, Delaware, or Rebecca. Leather shavings are good for mulching, and especially for putting in the trenches, under the vines.

Wine Grapes for Kansas.—"R." Dauphin Co., Kansas. The Isabella and Catawba are two well tried grapes for wine making. The Concord is gaining favor for the same purpose, and is largely grown in some parts of Missouri. It may safely be recommended. We would also advise a trial of Hartford Prolific and Diana, —as preferable to the Clinton.—Grape cuttings root the year they are put out, and the vines are usually cut back in the Fall or Winter, so that a "two year old vine" may have a "three year old root." The two year old vine will bear sooner than the two year old root. In transplanting, it is better to cut back most of the vine so as to get a strong new shoot the first season. "Bright's Grape Culture" (50c.) will give you much valuable information.

Planting a Vineyard.—Wm. A. Traker, Huntingdon Co., Pa., will find pretty full chapters upon grape culture in our former numbers. Most cultivators prefer planting, say about five feet apart, and tie each vine to a stake. If planted in rows five to six feet apart, and trained upon trellises, set the vines about eight feet distant in the row. Roots planted in the Spring will come into bearing soonest, but cuttings may be put in at the same time, for planting out another year.

Beurre Giffard Pear.—J. J. Vanderbilt, of Kings Co., L. I., left at our office, August 7, some very fine specimens of this really delicious, early pear, which were grown on the quince. An illustration and description will perhaps appear in our next issue.

Roses Failing.—E. E. Jones, Va. It is impossible to tell why your favorite rose tree sheds its flowers, without examining the plant itself. Perhaps it was budded or grafted upon another stock, and consequently short lived. Or its effort last season may have induced decay. A fruit tree or even a flowering shrub will frequently yield an extraordinary crop one year and decay the next. It is better to renew flowering shrubs and vines occasionally by bending down a branch to form a layer. This should be done while the plant is healthy.

Marvel of Peru (Four O'Clock).—H. N. Richardson, Chittenden Co., Vt. In our northern latitude this plant has become an annual, and it is not worth while to try to keep the roots through Winter. We succeed in getting a bloom from Spring sown seeds, by the 10th of July, and they continue in flower until killed by frost. They ripen seeds abundantly during the Summer.

Hibiscus Described.—W. R., Broom Co., N. Y. This is an annual, not very erect, say 18 inches high, with somewhat feathery or downy foliage, and blooms from June until frost. Flowers 1 to 2 inches across, single, of straw color, with a brown or purple center, quite pretty. The seed capsules are nearly round, and covered with hairs.

Nasturtiums at the South.—R. F. Clute, Chickasaw Co., Miss., states, that the Nasturtium seed he obtained of us, and also that bought of seedsmen, vegetated well, and produced fine plants with abundance of bloom, but grew to a bush form, instead of a vine, as is usual, and produced no fruit. Have others at the South noticed similar results?

Transplanting Hyacinths and Tulips.—G. W. Murphy, Alleghany Co., Pa. These need not be reset every season. Once in three years is sufficient. When they are to be transplanted, lift them early in July, keep in a dry place and plant again about the middle of October.

Carnations from Seed.—H. H. Huntress, Hillsborough Co., N. H. The production of a really fine carnation from seed, is not an easy matter. It may take years of trial, but choice new varieties are obtained in this way. The ordinary cultivator will do better to obtain roots, or layers from such colors and forms as he fancies. The same may be said of the gladiolus.

Norway Spruces Dying in Winter.—H. L. Pratt, Middlesex Co., Conn. As your trees lived through the Summer, it is likely there is something in the soil not congenial to them. Perhaps there is too much moisture. Or, possibly, the trees barely survived during the Summer and vitality was about expired at the commencement of Winter. With good roots and careful transplanting even into a poor soil, we seldom expect to lose a Norway Spruce.

Cleaning Carrot Seed.—H. D. Todd, New-Haven Co., Conn. After the carrot seed has been cut and thoroughly dried, rub it out by hand, or pound in a box or barrel if in large quantity. When shelled, pick out the coarser portions, and lightly fan, or winnow the remainder. A gentle breeze will carry away the chaff and leave the good seed behind. A coarse sieve is a good thing for winnowing these and other light seeds, the branches, leaves, etc., remaining in the sieve.

Kohl Rabi, Brussels Sprouts, etc.—W. Dyer, Steuben Co., Ind. Kohl Rabi gets woody when matured. It is better to use the bulbs when a little larger than one's fist. Cut in quarters, and boil until tender, then pare and serve with butter precisely as turnips. Broccoli and Brussels Sprouts are more like cabbages. They are better in the Fall and early Winter, than after having been kept a long time. Boil a sufficient number of the little heads, or "buttons" in a cloth, until sufficiently cooked, and serve as cabbage or cauliflower.

A "Whopper."—Not the story, of course, but the squash-vine.—Amos Heater, Mason Co., Illinois, writes: "I planted seeds of the Mammoth Leghorn Squash, received from the *Agriculturist* office last Spring, and the hail and frost left me but a single vine. That one has grown to cover 1¼ acres of land! and I will have at least a two-horse load of squashes from that one plant!!!" Call this way neighbor, when the crop is gathered; we shall have a spare hat for you.

Blue Grass for Pasture.—J. A. Parks, Jackson Co., Mich. Blue grass (*Poa pratensis*) will grow on almost any soil. It succeeds best, however, on limestone lands—the blue grass pastures of Kentucky, where such soils predominate, have obtained world-wide celebrity. At the North, and on soils of other character, timothy is generally preferred for pasture.

Sawdust for Manure.—M. A. Allen, Warren Co., N. Y., inquires if saw-dust, principally pine and hemlock, which has been accumulating at the bottom of a pond some twenty years, would answer a good purpose to manure a sandy loam which has been "run" until clover will not "take" upon it. He says the deposit of saw-dust and mud can be placed upon the land at twelve cents per load. It will pay well to draw it out. Let a large pile be made; apply half a bushel of lime or leached ashes per load; fork it over occasionally and mix with it stable manure if any can be obtained. Plow it in lightly, and mix it well with the soil by thorough harrowing, and clover can hardly fail to "take."

New Insect on Rye.—Some time since we received from Mr. Daniel Steck, Lycoming Co., Pa., specimens of stalks of rye showing the work of an insect new to us, and of whose ravages we have not previously heard any complaints. Eggs are deposited immediately above every joint of the stalk, where they soon hatch, and the presence of the larva causes the growth of a fleshy excrescence. This interferes with the development of the grain, and also weakens the stalk, often causing it to fall to the ground about the time of blossoming. Mr. S. states that many fields in Lycoming and adjoining counties have been greatly injured in this manner. We forwarded the specimens received, to an expert Entomologist, but have as yet heard nothing from them. We shall be obliged for further particulars as to the appearance and habits of the parent insect, with any information that may be given as to the best means of preventing its ravages.

Rose Bugs on Grape Vines.—A. B. Brumbaugh, Huntingdon Co., Pa. The bug you complain of, proves, by the specimen sent, to be the Rose Bug, which is frequently very troublesome to the grape vine, eating away the bloom and tender buds. As they are little affected by lime, soap or other substances, hand picking, or shaking them into dishes of hot water, or upon sheets, to be burned, are about the only remedies. This seems like a great task, but when daily followed up, they will soon nearly disappear. We have observed they were much more troublesome where the ground was not disturbed, than where it was cultivated. They pass the Winter in the soil to reappear in Spring for their ravages upon rose bushes, grape vines and cherry trees.

PREMIUMS FOR 1861.

Vol. XX.

(Subscriptions to the American Agriculturist for 1861 can begin now without extra charge.—See page 288.)

Friends, we desire to run the circulation of our *Twentieth Annual Volume* up to **100,000.** To do this we ask your kind and effective assistance, for which we are willing to divide with you all the income above the bare cost of carrying on the paper and our own living. After close figuring, and liberal terms from manufacturers, we find we can fully keep up the character of our paper, and even *improve* it, and yet offer you the large premiums named below. These articles are offered as direct pay for time spent in canvassing for names. *This year we make no distinction between new and old subscribers,* though it is supposed that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ In selecting articles for premiums, we have aimed to get such as are *useful,* and as have been most frequently called for by our readers. ☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second hand thing, will be sent out, but each article offered is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing for competition. Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he, or she, is working for; and also that if a higher premium is not secured, a lower one can be taken.

☞ The work of collecting names can begin *now* with special advantage. See last page (288) for extra inducements to new subscribers.

☞ Any extra specimen copies, or show bills, needed by canvassers, will be freely furnished. We have on hand a good show bill for this year, and shall have a new one out for 1861 before the close of this year.

☞ Of course only one premium can be paid on the same subscriber.

☞ Every person collecting names for premiums, can send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent, one of them marked at the top, "For premiums," also with the name of the sender. These duplicate lists will be kept on file by themselves, to be referred to in making up the premium when any person has completed sending in names for Volume XX.

☞ The premiums are offered for subscribers for Volume XX (1861), whenever received. Canvassers will have time for completing their lists, but the premium will be paid as soon as any list is made up—if duplicate lists are sent, to refer to at once—without these lists there may be some delay in posting up the books, and collecting together the several names sent by any individual.

☞ No premium is sent till *specifically asked for.* We have many friends who send in large lists but will take no premium, and we are not certain that premiums are desired unless the fact be mentioned particularly.

☞ It is believed that all can recommend this journal to their friends and neighbors, and urge them to take and read it. It will continue to be independent, outspoken, and reliable, the special friend, advocate, and promoter of the farmer's interest, and will aim to facilitate and lighten the labors of every household. A larger number of instructive as well as pleasing engravings, and a greater amount of really useful information, will be given in the next volume, than in any preceding one. *Onward, upward,* is our motto.

☞ Premiums **A,** to **J,** are offered for subscribers at the lowest club price (80c.), or at the regular price ($1) Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

Premium A.

140 Subscribers at 80 cents each, (or **95** at $1 each,) will entitle the person getting up the club to one of *Wheeler & Wilson's* best **$50 Sewing Machines,** new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly three years' use in our own family. We want no better.—The machines will be selected new at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

Premium B.

130 Subscribers at 80 cents each, (or **90** at $1 each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopædia,** now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Ten volumes are now ready, and the remaining five will be furnished as fast as issued. Price, $45.

Premium C.

98 Subscribers at 80 cents each, (or **69** at $1 each,) will entitle the person getting up the club to one of *Willcox & Gibbs'* **$35 Sewing Machines,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread), and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one for some time past in our own family, we can recommend it to those who can not afford to buy the higher priced double-thread machines. (The regular price of this machine is $30, but we have included in our offer $5 extra for the set of *Hemmers,* because those used with this machine are very simple and effective, and should go with every machine sent out.) The machines given as premiums, will be selected new at the factory, be well boxed, and will be forwarded to the recipient free of expense, except for freight after leaving the city. They will go out set up ready for use, with printed directions for operating.

Premium D.

65 Subscribers at 80 cents each, (or **32** at $1 each,) will entitle the person getting up the club to one of the New **$10 Wringing Machines,** described on page 247 of the August *Agriculturist.* This is one of the best labor-saving and clothes-saving inventions of the day, and we unhesitatingly say that it will pay to have one to assist in the washing of every family, even if of only moderate size. We would not take $50 for our machine, if another could not be purchased.

Premium E.

60 Subscribers at 80 cents each, (or **30** at $1 each,) will entitle the person getting up the club to one of Kendall's **Aneroid Barometers,** described on page 232 of the August *Agriculturist.* This is a good portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. (Price $10.)

Premium F.

50 Subscribers at 80 cents each, (or **26** at $1 each,) will entitle the person getting up the club to one of the best **$8 Straw and Hay Cutters.** [If preferred, the best $8 **Subsoil Plow** (two-horse) will be given.]

Premium G.

42 Subscribers at 80 cents each, (or **22** at $1 each,) will entitle the person getting up the club to the new and enlarged $6½ *Pictorial Edition of* **Webster's Unabridged Dictionary.** This standard work comprises **1748** large 3 column pages. It is not only an ornament to every house, but is of great practical use; and its full definitions place it next to the Cyclopædia as a source of general information. It weighs 8½ lbs., and can go by express, or be sent by mail for 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium H.

40 Subscribers at 80 cents each, (or **21** at $1 each,) will entitle the person getting up the club to one of the best **$6½ Hand Corn Shellers,** a convenient, effective, and useful implement.

Premium I.

30 Subscribers at 80 cents each, (or **16** at $1 each,) will entitle the person getting up the club to one extra copy of Vol. XX, and also to the **4** previous unbound **Volumes** of the *American Agriculturist,* (16, 17, 18, 19) *sent post paid.*

Premium J.

26 Subscribers at 80 cents each, (or **14** at $1 each,) will entitle the person getting up the club to a $4 **Pocket Microscope,** with the celebrated "hour-glass," or Coddington lens, in a solid silver case. Sent post-paid.

Premium K.

25 Subscribers at 80 cents each, will entitle the person getting up the club to an extra copy of Vol. XX, and also to any *three* of the unbound volumes 16, 17, 18, and 19, sent post-paid. ☞ **20** Subscribers at 80 cents each, to an extra copy of Vol. XX, and *two* of those volumes. ☞ **15** Subscribers at 80 cents each, to an extra copy of Vol. XX, and *one* of these volumes.

Premium L.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These paints are imported from London, and are by all, considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid anywhere within 3000 miles. (If to go to the British Provinces or the Pacific Coast, the recepient will need to send 84 cents for the extra postage required above the 6 cents per ounce which we pay. This and the next premium, if sent with our box of seeds, going to California in February, can go without the extra expense for postage.)

Premium M.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a mahogany case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, they will answer for ordinary practice by children or beginners, and for common sketching. They will also be sent by mail, post-paid. (If to go to the British Provinces, or to the Pacific Coast, $1.05 will need to be sent by the recepient to pay the extra postage above 6 cents per ounce.)

Premium N.

10 Subscribers at 80 cents each, will entitle the person getting up the club to any *one* of the four previous unbound volumes (16, 17, 18, 19,) sent post-paid.

Book Premium.

Valuable Book Premiums.—Instead of the above premiums, any person getting up a club of 20 or more names, may choose Books from Saxton, Barker & Co's list (advertised on page 284) *to the amount of* 12½ *cents for each name forwarded at* 80 *cents,* (or 32½ cents for each name sent at $1,) and the books will be sent post-paid. (If to go over 3000 miles, the recipient will need to send 20 cents for extra postage on each dollar's worth of books. ☞ Persons making up a club for any of the above premiums, and getting some names over the required amount, will be entitled to books for the surplus names.

Seed Premium.

Premium to Every Subscriber.—A liberal distribution of *valuable seeds* will be made during next Winter, to ALL regular subscribers alike, whether single or in clubs, and whether received from agents, or otherwise. (A seed depository will be established in California for the convenience of subscribers on the Pacific Coast.)

Business Notices.

☞ *Sixty Cents a Line of Space.*

ITALIAN BEES.

Pure Queens of this race are now ready for delivery, impregnated by pure Italian drones of which some twenty thousand are flying about the hives. No common drones are allowed in or near the grounds, and my neighbors have kindly allowed me to remove their common bees to a locality distant two miles from my Italians. For terms and other information apply for Circular to

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To Managers of Agricultural Societies.

It seems hardly necessary to remind the managers of Agricultural and Horticultural Societies, that the best and most economical premiums they can offer, are copies of agricultural periodicals. Money given, is soon spent or forgotten. A good paper, coming free during a year, is operative not only as a stimulus at the outset, but its frequent reception is a constant reminder of the society; and its perusal is likely to keep up an interest in agricultural improvements. We offer this as a general remark, not applicable to our own journal merely. Many thousand copies of the *Agriculturist* are annually given out in this way, however, and we shall be happy to correspond with the Officers of other societies, who may think the matter worthy of their attention.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Saturday Evening, Aug. 18, 1860.

The receipts of Breadstuffs have been less extensive, except Corn, the arrivals of which have been unusually large. The sales also show a falling off, except corn, in which the transactions have been quite large. Receivers have generally sold quite freely, and prices have been depressed. The demand has been good, especially for Flour and Wheat, which have been in request for export. An unusual scarcity of shipping accommodation, and a further rise of freights to British ports, however, have checked business. The new crop of Wheat is coming in freely. The receipts have been very satisfactory, both in quality and condition. The harvest reports from the West and Northwest are quite encouraging. At the South, crops have suffered great injury from the long drouth, and it is thought that supplies for the people in many parts of the Southern States will have to be procured at the North. The excitement in Tennessee is similar to that which prevailed in the frosted districts of Ohio and Pennsylvania in June and July, 1859. The indications are, however, that ample provisions are being made to prevent anything like a famine at the South, and it is hardly probable that famine prices will be permitted to prevail very long, as railroads and steamboats leading in that direction, are crowded to their utmost capacity in carrying food into the suffering districts; while at the same time, the granaries at the great West are in no danger of being exhausted by any demand, either foreign or domestic, that is likely to be made upon them. Yet some operators look to the circumstance of deficient crops in parts of the South, as likely to occasion an additional inquiry, sufficient, at least, to keep up prices, especially in view of the accounts of unfavorable weather, and rather gloomy crop prospects in the British Islands, and in some other portions of Europe. Western millers are complaining of the high prices current, which are considerably above the value of flour, relatively, and they begin to manifest a disposition to withdraw. The advance in prices has been attributed to the shipping demand, but this, according to the export figures, is light as compared with the receipts. Dealers report the amount going into store on commission as trifling. The great bulk of the receipts, therefore, must have been taken by local consumers, or on speculation......Cotton has been rather more sought after at somewhat firmer prices......The transactions in Hay, Hops, and Wool have been moderate......Provisions and other kinds of Produce have been quiet.

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats*
26 bus. ds. *this* mon.	221,520	1,285,000	1,858,400	12,300	22,465	387,500
26 bus ds *last* mon	268,940	1,519,803	1,030,625	30,523	25,632	394,267

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
26 business days *this* mon.	431,335	1,676,450	1,815,000	22,600	——
26 business days *last* mon.	459,460	2,050,400	1,199,000	39,600	35,000

The receipts at tide-water of Flour, Wheat, Corn, and Barley, for the second week in August, 1860 and 1859, has been as follows:

	Flour, bbls.	Wheat, bush.	Corn, bush.
1860	9,800	188,000	559,100
1859	5,100	23,800	179,800
Increase,	4,700	164,200	379,300

The aggregate of the receipts of the above articles, so far, for the years 1860 and 1869, have been:

	Flour, bbls.	Wheat, bu.	Corn, bu.	Barley, bu.
1860	372,900	4,132,200	7,641,700	78,900
1859	197,500	679,600	1,443,000	150,300
Increase	175,400	3,452,600	6,198,700	Dec..71,400

Reducing the Wheat to Flour, the excess in the receipts of 1860 is equal to 865,920 bbls of Flour.

The receipts at tide-water of the principal kinds of Breadstuffs, from the opening of the Canals to and including the 14th inst., have been as follows:

	1860.	1859.	1858.
Canal open—	April 28.	April 15.	April 25.
Flour, bbls.	372,900	197,500	885,000
Wheat, bush.	4,132,200	679,600	4,926,600
Corn, bush.	7,641,700	1,443,000	2,553,600
Barley, bush.	78,900	150,300	383,200
Rye, bush.	118,900	106,000	214,100
Oats, bush.	3,544,900	2,261,000	2,375,000

The prospects of the new crop of Barley are beginning to attract the attention of our merchants. The crop of 1860 will undoubtedly exceed that of 1859 in quantity, but the average quality will be inferior to that of the previous year. The crop of Illinois and Wisconsin, and Spring Barley in this State, are much poorer than last year's crop. The crop in the Canadas will be the largest in quantity and finest in quality ever grown by them. The stock of old malt is much less than last year, and the consumption is much larger. The abundance of the new crop will insure a low range of prices, but choice samples will undoubtedly command a higher price relatively than last year.

CURRENT WHOLESALE PRICES.

	July 19.	August 18.
FLOUR—Superf to Extra State	$5 20 @ 5 60	$5 20 @ 5 45
Superfine Western	5 15 @ 5 25	5 05 @ 5 15
Extra Western	5 35 @ 7 50	5 25 @ 7 50
Fancy to Extra Genesee	5 60 @ 7 50	5 45 @ 7 50
Super. to Extra Southern	5 50 @ 7 50	5 50 @ 7 50
RYE FLOUR—Fine and Super	3 45 @ 4 25	3 30 @ 4 10
CORN MEAL	3 45 @ 3 75	3 50 @ 3 75
WHEAT—Canada White	1 42 @ 1 52	none selling.
Western White	1 42 @ 1 56	1 30 @ 1 50
Southern White	1 42½ @ 1 55	1 35 @ 1 50
All kinds of Red	1 25 @ 1 40	1 15 @ 1 34
CORN—Yellow	65 @ 68	66 @ 68
White	65 @ 75	68 @ 80
Mixed	61 @ 62	62 @ 62½
OATS—Western	38 @ 40	37½ @ 39½
State	40 @ 41	39 @ 40½
Southern	36 @ 39	35 @ 38
RYE	80 @ 82	77 @ 78
BARLEY	60 @ 72	none selling.
White Beans	95 @ 1 05	
HAY, in bales, per 100 lbs	87½ @ 95	80 @ 95
COTTON—Middlings, per lb	10½ @ 10¾	10⅝ @ 11
RICE, per 100 lbs	4 00 @ 5 00	3 75 @ 4 87
HOPS, crop of 1859 per lb	6 @ 13	7 @ 14
PORK—New Mess, per bbl	18 37 @	18 20 @ 18 30
Prime, new, per bbl	14 25 @ 14 37	14 @ 14 25
BEEF—Repacked Mess	8 50 @ 10 50	8 50 @ 10 50
Country mess	4 50 @ 5 75	4 75 @ 6 00
Lard, in bbls. per lb	13 @ 13⅜	12½ @ 13¼
BUTTER—Western, per lb	10 @ 15	11 @ 15
State, per lb	10 @ 18	14 @ 21
CHEESE, per lb	7 @ 11	7 @ 10½
EGGS—Fresh, per dozen	14 @ 15½	12 @ 14½
Western, per doz		9 @ 12
POULTRY—Fowls, per lb	12 @ 14½	11 @ 12
Chickens, per pair		37 @ 62
Geese, per pair	1 25 @ 1 50	2 00 @ 2 50
Ducks, per lb	15 @ 17	14 @ 15
Turkeys, per lb	12 @ 14	14 @ 16
Tame Pigeons, per doz	1 25 @ 1 50	1 50 @
FEATHERS, Live Geese per lb.	44 @ 55	44 @ 54
SEED—Clover, per lb	None selling.	8½ @ 9
Timothy, per bushel	do.	4 00 @ 4 25
SUGAR, Brown, per lb	6¼ @ 8½	6¼ @ 8½
MOLASSES, New-Orleans, pr gl	45 @ 48	47 @ 50
COFFEE, Rio, per lb	13¾ @ 15	14¼ @ 15¾
TOBACCO—Kentucky, &c. pr lb	3 @ 12	3 @ 12
Seed Leaf, per lb	4 @ 25	4 @ 25
WOOL—Domestic fleece, per lb.	32 @ 58	34 @ 58
Domestic, pulled, per lb	28 @ 47	28 @ 48
HEMP—Undr'd Amer'n pr ton.	130 @ 150	130 @ 150
Dressed American, per ton	160 @ 200	160 @ 200
TALLOW, per lb		10 @ 10¼
OIL CAKE, per ton	30 00 @ 36 00	31 00 @ 38 00
APPLES, per barrel	2 00 @ 3 75	1 25 @ 2 75
PEARS, per bbl		3 00 @ 5 00
PEACHES, South'n, per bush'l.	3 50 @ 6 00	3 00 @ 6 00
Delaware, per basket		2 00 @ 3 00
PLUMS, per bushel		2 50 @ 4 00
HUCKLEBERRIES, per bushel	3 00 @ 4 00	2 50 @ 2 75
BLACKBERRIES, per bushel	3 00 @ 4 00	2 50 @ 3 00
New-Rochelle, per quart		16 @ 18
WATERMELONS, per 100	12 00 @ 18 00	10 00 @ 20 00
NUTMEG MELONS, per bbl		2 00 @ 2 75
Dried Apples, Per lb.	4½ @ 5¾	4½ @ 5½
Dried Peaches—pr lb. South'n	6 @ 14	6 @ 14
Dried Cherries, pitted, per lb.	20 @	18 @ 20
POTATOES—Mercers, p. bbl	2 50 @ 3 00	1 50 @ 2 25
Junes, per bbl	1 75 @	1 62 @ 1 75
Dyckman, per bbl	1 87 @ 2 00	1 50 @ 1 75
ONIONS, Red, per bbl	2 00 @ 2 50	2 25 @ 2 50
TURNIPS, per barrel	2 50 @	1 25 @ 1 50
CABBAGES, per 100	3 00 @ 6 50	3 00 @ 6 00
CUCUMBERS, p. 100	75 @ 1 00	50 @ 62
SQUASHES, per bbl.	2 00 @ 2 50	1 12 @ 1 50
GREEN CORN, per 100	75 @ 1 00	50 @ 87
BEETS, per 100 bunches	2 50 @	3 00 @
TOMATOES, per bushel	1 00 @ 2 00	75 @ 1 00
EGG PLANTS, per 100		6 00 @ 8 00
LIMA BEANS, per bushel		62 @ 75

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been abundantly supplied; Receipts for 4 weeks prior to Aug. 14, were 19,452, averaging 4863 per week, or about one-fifth more than for the previous month. Of course prices have declined. At the last weekly market (Aug. 14), 5,195 cattle were offered, and barely sold out at following prices per pound for the estimated dressed weight of the four quarters: Best cattle 9c.@9½c. per lb.; Medium, 8c.@8½c.: Poor grade, 6c. @7½.; Average price of all sold, 7¾c.

VEAL CALVES.—Receipts have been light, numbering but 2,998 for four weeks past. Prices have advanced ¾c.@1c. per lb. live weight. A very few of the best sell at 7c.; good for 6½c.; Poorer grades 5½c. Present demand very good.

SHEEP AND LAMBS are abundant.—Receipts for 4 weeks 55.813, or 13,953 per week. Sales active at a little lower rates. Good Sheep sell for 4½c. per lb. live weight; ordinary sheep at 4c. Lambs are plenty, and sell for 5c. @6c. per lb.

HOGS.—Receipts for 4 weeks 17,650, or 4,412 per week. Supply equal to demand. Prices same as last month; corn-fed hogs, 6½c.@6¾c. per lb., live weight; still fed, 6c.@6¼c.

The Weather, since our last report, (July 19,) has been quite favorable for farm crops. The drouth that was prevailing when our former number was issued, early gave place to copious rains followed by hot weather which pushed corn and other late crops ahead rapidly. Abundance of rain has fallen during the past four weeks.—OUR DAILY NOTES, condensed read thus: *July* 20, clear and hot, (93°)—21, cloudy with light showers—22, clear and warm, rather dry—23, fine rain A. M., doing much good, but not enough of it—24, 25, clear and hot—26, clear and fine A. M., heavy thunder showers P. M.—27, 28, clear and fine—29, cloudy, rain at night—30, 31, clear and hot: ——*August*, 1, 2, 3, clear and fine—4, showery during day with heavy thunder storm at night—5 to 11, clear hot weather; mercury rose to 95° on the 8th, being the hottest day of the season—12, 13, heavy rain, the best of the season, filling cisterns and thoroughly soaking the ground the first time this Summer—14, rain A. M.; clear P. M.—15, 16, 17, 18, clear, cool, everything growing finely.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) *r* indicates rain.]

JULY.

1......68*r*	8......60	14......60	20......74	26......64*r*
2......64	9......67*r*	15......65	21......75*r*	27......68*r*
3......66	10......69	16......70	22......65	28......58
4......70*r*	11......68	17......67	23......68*r*	29......65*r*
5......66*r*	12......60	18......63*r*	24......59	30......71*r*
6......56	13......60*r*	19......70	25......61	31......69
7......58				

AUGUST.

1......62	4......68*r*	7......69	10......70	13......71*r*
2......60	5......71	8......73	11......72	14......63*r*
3......64*r*	6......67	9......73	12......65	15......58

Fair of the American Institute.

This association has decided to hold an Agricultural and Horticultural exhibition at the Palace Garden, on Fourteenth-st., near Sixth Avenue, in this City, to commence Sept. 25th, and continue two weeks.

Competition is open to all, whether members or not.

All articles (except poultry and the second series of cut flowers) to compete for prizes must be presented before 2 P. M. on Monday, Sept. 24th.

Those intending to exhibit should give early notice to Thos. McElrath, Cor. Secretary, who will also receive and take charge of packages sent for exhibition.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.

Thirty-three and one third cents per line of *space* for each insertion, (three lines for $1)

One whole column (145 lines) or more—$40 per column.

☞ Business Notices *Sixty* cents per line.

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Ten cents per line of *space* for each insertion.

One whole column (130 lines), or more, $10 per column.

☞ Business Notices *twenty* cents per line.

FOR BOTH EDITIONS—ENGLISH AND GERMAN.

Forty cents per line; $45 per column.

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☞ On Advertisements to stand three months or more, a discount of 5 per cent will be made from the above terms for each three months of the whole term paid for in advance. Thus: 5 per cent off for 3 months; 10 per cent off for 6 months; 15 per cent off for 9 months; and 20 per cent off for 12 months.

Metropolitan Washing Machine.

(*From Rev. A. Dunning, Congregational Clergyman,*)

THOMPSON, Ct., July 17, 1860.

DAVID LYMAN, Esq.:

My Dear Sir—From the testimonials which, week after week, come up from the kitchen to the study, testimonials in which I have the fullest confidence, I am prepared to speak in very favorable terms of the "Metropolitan Washing Machine" and of the "Attachment," and without hesitation to recommend them both. For a number of months they have been in use in my family, and have given entire satisfaction.

I think I speak within bounds when I say that with the *Metropolitan* the washing can be done in a third of the time, and with a third of the labor; and that with the *Attachment*, the wringing (without any "wringing") can be done in a third of the time and with a third of the labor, required in the *old way*.

The whole sisterhood, and therefore the whole brotherhood ought to feel under lasting obligations for these "easy methods" of washing—a sort of "royal road" to cleanliness.

I am truly yours, &c. A. DUNNING.

For sale by DAVID LYMAN, Middlefield, Conn.

Send for a circular.

Butter and Cheese Maker Wanted.

Either to take charge of, or have an interest in a dairy of 60 to 100 cows, with ample fixtures and facilities for the manufacture of butter and cheese. Address, with good references,

RAND & RICHARDSON,
North Fork, Mason Co., Ky.

5,000 AGENTS WANTED—To sell 4 new inventions. Agents have made over $25,000 on one,—better than all other similar agencies. Send 4 stamps and get 80 pages particulars, gratis. To sell Alarm Locks, Steamers, Book Holders and Belt Hooks. EPHRAIM BROWN, Lowell, Mass.

Choice Bulbous Roots.

New descriptive and priced Catalogue of
HYACINTHS,
LILIUMS,
TULIPS, &c., &c

Embracing the largest assortment ever offered.
Catalogues sent FREE.

ANDREW BRIDGEMAN,
878 Broadway, New-York.

METAL FINGER NAILS FOR HUSKING CORN.

Gould's Celebrated Husking Thimbles.

We continue to invite the attention of Farmers and Dealers to this simple and effectual implement for husking corn, and are ready to place into their hands (free of charge) credentials of such a nature, as to defy disbelief in its real merits, and augmenting popularity.

Agents wanted. Circulars, giving full particulars, sent gratis; six pairs of sample Timbles (assorted sizes) send free of postage on receipt of one dollar.

Orders covering five dollars fulfilled at wholesale prices by Express. Address GOULD & CO., Alliance, Ohio.

HAY—HAY—HAY.

INGERSOLL'S IMPROVED PORTABLE HAY PRESS, for packing *Hay, Cotton, Rags, Hemp, Broom Corn*, &c., &c., 700 of these machines having been sold during the last three years, letters from every State in the Union testify to their *superiority, convenience* and *economy*.

Price. *Hay Press No.* 1, $50; wt. of bale 150 to 200 lbs No. 2 $75; wt. of bale 250 to 300 lbs. Cotton Press. $150. Any sizes, and for any purpose of packing, made to order and delivered on shipboard in New-York. Address for Circulars or Machines FARMERS MANUF'G CO., Greenpoint, Kings Co., N. Y, *A Partial List of the* AGRICULTURAL BOOKS *published by*

C. M. SAXTON, BARKER & CO.,

No. 25 PARK ROW, NEW YORK.

American Farmer's Encyclopedia,..,....	$4 00
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Allen's (R. L.) American Farm Book,...	1 00
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Allen's (L. F.) Rural Architecture, ...	1 25
Allen on the Culture of the Grape,......	1 00
American Architect,.	6 00
American Florist's Guide,..............	75
Barry's Fruit Garden, ...	1 25
Bement's (C. N.) Rabbit Fancier,.......	50
Blake's Farmer at Home,................	1 25
Blake's Every-day Book, for the Country,	2 25
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Browne's American Poultry Yard,......	1 00
Browne's Field Book of Manures,.......	1 25
Bridgeman's Young Gardener's Assist't,	1 50
Bridgeman's Kitchen Gardener's Inst'tor	60
Bridgeman's Florist's Guide,...........	60
Bridgeman's Fruit Cultivator's Manual,.	60
Breck's (Joseph) Book of Flowers,......	1 00
Buist's Am. Flower Garden Directory,...	1 25
Buist's Family Kitchen Gardener.......	75
Chorlton's Grape-Growers' Guide,......	60
Cobbett's American Gardener,..........	50
Cottage and Farm Bee-Keeper..........	50
Cole's (S. W.) American Fruit Book,....	50
Cole's American Veterinarian,..........	50
Dadd's (Geo. H.) Modern Horse Doctor..	1 00
Dadd's (Geo. H.) American Cattle Doctor	1 00
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Elliott's Western Fruit Book,..	1 25
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FARM AND RESIDENCE AT MADISON, Morris Co., New-Jersey. The subscriber offers for sale his residence, consisting of 164 acres of land, with fine improvements, including a Spacious Mansion House, Grapery, Fruit of all kinds, commodious Barns and Farm Buildings, Tenant Houses &c. Morris County is celebrated for the favorable effect of its climate upon Consumptives or those troubled with bronchial affections. This property is an attractive one to a Gentleman of means. For particulars address the owner
ALFRED M. TREDWELL, 45 Fulton st., New-York City.

Madison is distant 1 hour 20 minutes from New-York City by Morris and Essex Rail Road.

THOROUGH BRED NORTH DEVON AND AYRSHIRE CATTLE. In consequence of above I offer for sale in lots to suit purchasers, my entire stock of Thorough Bred Cattle at reduced prices. For particulars address as above.

Dutchess County Farm for Sale.

151 acres in the village of New Hackensack, 5 miles from New Hamburg Landing and Depot, 7 miles from Po'keepsie. Good land and buildings—also fine timber. Church, mills, shops, &c., within one half a mile. Price low and terms easy. To view the premises, or for particulars, apply to
O. T. SEWARD, New Hackensack, Dutchess Co., N. Y.

FOR SALE,—A FARM OF 100 ACRES, 30 miles from New-York, rich soil, well watered. Price $10,000. Terms easy. Address RICHARD BERRIAN, 44 Front-st., New-York.

Farm to Rent.

The Subscriber (himself a Pennsylvanian) wishes to rent out his farm, located in Caldwell Co., N. Carolina The farm contains about 120 acres of improved bottom land, has good buildings, and is convenient to churches, schools, mills, &c.

A practical farmer who understands economy, and who has a family of industrious sons, can get a good situation. References exchanged. Address JAMES C HARPER,
July 28, 1860. Patterson, N. C.

WANTED—EMPLOYMENT AS PREPARATORY Tutor or Farm Manager.—Has had extensive experience in Farming, Draining and General Improvements. Address T. J. A., Am Agriculturist office.

RUSSELL'S FLEXIBLE HARROW, described on page 265, is cheap, strong and durable. Town, County and State Rights for sale on reasonable terms. Address JOHN RUSSELL, Grampian Hills P. O., Clearfield Co., Pa.

AN IMPORTED NORMAN STALLION FOR SALE. The finest animal of the race ever brought to this country. He is dapple gray, 15½ hands high, beautifully formed, of great spirit and fine action, and weighs, when in full flesh about 1400 pounds. He is a sure foal getter, and his stock commands the highest prices as roadsters and farm horses of all work. J. D. WATSON, 189 Water-st., New-York.

PUBLIC SALE OF PURE BRED SHORT HORN
AND
NORTH DEVON CATTLE;
BROOD MARES, COLTS AND STALLIONS of the Black Hawk and Messenger breeds.
BERKSHIRE, ESSEX AND SUFFOLK SWINE,
AND SOUTH DOWN SHEEP.

"THE ALBANY COUNTY BREEDING ASSOCIATION" will sell at Public Auction at the "Log Tavern Farms," on the New-Scotland Plank Road, two miles from Albany, N. Y., on WEDNESDAY, September 12th, at 12 o'clock, M., a select and large herd of SHORT-HORN and NORTH DEVON Cows, Heifers, Young Bulls and Calves.

TERMS—Good notes at four months, without interest.

CATALOGUES will be mailed by applying to
R. H. BINGHAM, 48 Steuben-street, Albany, N. Y.

Carriages will run hourly from the Stanwix Hall.
WILLIAM M. BULLOCK, Bethlehem, near Albany.
JOSEPH HILTON, New-Scotland.
WILLIAM H. SLINGERLAND, Norman's Kill.
WILLIAM HURST, Albany, N. Y.
GEO. W. ADAMS, Whitehall, N. Y.
Albany, Aug. 15. Breeders and Managers.

SUFFOLK SWINE.—The Subscribers have on hand and for sale pure blood Suffolk Pigs, bred from their own importations and descendants. Address
ISAAC STICKNEY, or
JOSIAH STICKNEY, } Boston, Mass.

BERKSHIRE PIGS. — BRED FROM different importations. For sale by
W. H. CLAY, 82 Wall-st., New-York.

The American Corn Husker.

(JOHNSTON'S PATENT.)

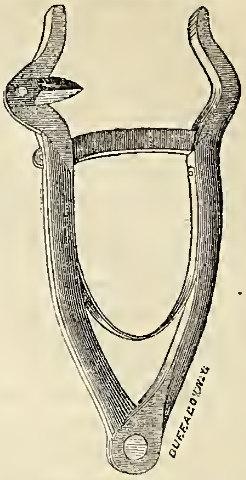

FIGURE 1

THE AMERICAN HAND CORN HUSKER, represented above, is apparently a very simple and useful implement. It promises to supply, at a cheap rate, a long-sought desideratum among farmers—something to facilitate the husking of corn, and save the hands and fingers.

It is nearly human in its operation, and becomes, in its use, almost a part of the hand, and yet will aid and protect it. It has been thoroughly tested and highly commended by more than *one thousand practical farmers.*

Machines now in use for husking corn, do not operate well, can not facilitate the work, as they require all the corn to be picked and brought to them, and are expensive and complicated, and require skill to use them. The work is performed by them very imperfectly, the corn is wasted, and the husks, silks, and fibers, are only in part removed. But the new American Corn Husker obviates all these objections. Its advantages may be enumerated as follows:

1—In the use of it the corn is only handled ONCE, and less than when husked by hand, as only two motions are necessary, and the husks stripped only on one side.

2—It can be used as well with mittens or gloves, as without.

3—The corn does not have to be picked and brought to it.

4—It is always in your hand, and can be used with the same facility in husking corn standing on the hill, or in the stook, or after it has been picked.

5—It is not any hindrance to the use of the fingers by which it is held—it is so light and compact.

6—By two quick motions the corn is husked, so that one can husk much more with it than he can without it.

7—The corn is perfectly husked, and not a silk, or husk, or fiber is left.

8—The finger part of the Husker operates like the human fingers in opening the husks, stripping them off, & severing the ear.

9—The ear is separated from the husks, most of which are left on the stalk.

10—By means of the diamond-pointed knife, and the leverage obtained between the cross-bar, fingers and knife, the ear is very quickly and easily separated from the stalk.

11—It affords a perfect protection to the hand and fingers.

12—The simplicity and price, *only one dollar*, will recommend it to every farmer.

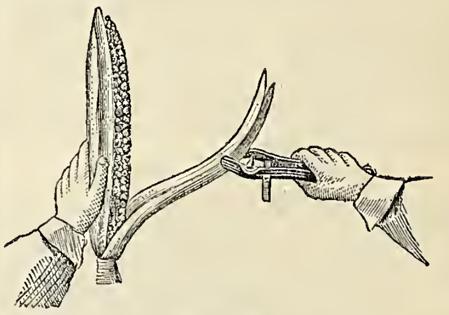

FIGURE 2.

OPERATION.—Any one will at once be expert in the use of this Husker. The ear should be seized by the left hand, near the middle, and in precisely the same way as if it was to be husked by the hand. The Husker is held in the right hand, with the knife side up, in the same way that Sheep Shears are held. The husks are seized near the top of the ear with the fingers of the Husker, and are stripped off by a quick motion This is represented in the above illustration, (figure 2.)

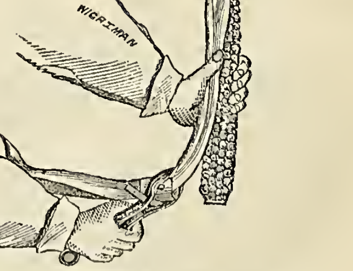

FIGURE 3.

Now you can see where the ear should be cut off,—and as the diamond-pointed knife enters the stalk, the ear is severed by means thereof, and the leverage obtained between the cross-bar, the knife, and the forward ends of the fingers. Whatever husks were not stripped down by the first motion, now readily separate from the ear. This is represented by the above engraving,—figure 3. This new Husker is manufactured by
R. L. HOWARD, Buffalo, N. Y

WILLCOX & GIBBS SEWING MACHINE.

PRICE $30.

REMARKABLE FOR ITS SIMPLICITY.

"Has evident points of superiority as a FAMILY MACHINE over all others."—Phila. Press.

Manufactured by

JAMES WILLCOX,
No. 508 BROADWAY, opposite St. Nicholas.

EVERY FARMER who would

like to make a note of everything of interest and value that occurs on his farm, should procure a copy of

The Comprehensive Farm Record,

Which is adapted for being used for twenty-five years. A more curious and desirable book for the farmer was never made. Price $3 00.

The subscribers also publish all kinds of Agricultural Books. ☞Send for a Catalogue.

SAXTON & BARKER,
Publishers of the Horticulturist,
25 Park Row, New-York.

THE AMERICAN

FRUGAL HOUSEWIFE.

BY LYDIA MARIA CHILD.

33d Edition. 12mo. Price 38 c. free of Postage.

This little work is a real *multum in parvo*, containing many valuable hints in domestic economy, a large number of usufal receipts in cookery, showing how to make good dishes at little cost, &c., &c.

The book is exactly suited to those to whom it is dedicated, i. e. those who are not ashamed of economy.

It should be in the hands of every housekeeper in the country. Published by S. S. & W. WOOD, 389 Broadway, New-York.

50.000 Copies already Sold.

EVERYBODY'S LAWYER
AND
COUNSELLOR IN BUSINESS.

BY FRANK CROSBY,
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It Tells You How to draw up PARTNERSHIP PAPERS and gives general forms for AGREEMENTS of all kinds, BILLS OF SALE, LEASES AND PETITIONS.

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It Tells You The Laws for the COLLECTION of DEBTS, with the STATUTES of LIMITATION, and amount and kind of property EXEMPT from EXECUTION in every State.

It Tells You How to make an ASSIGNMENT properly, with forms for COMPOSITION with CREDITORS, and the INSOLVENT LAWS of every State.

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It Tells You What constitutes LIBEL and SLANDER, and the Law as to MARRIAGE DOWER, the WIFE'S RIGHT IN PROPERTY, DIVORCE and ALIMONY.

It Tells You The Law for MECHANIC'S LIENS in every State, and the NATURALIZATION LAWS of this country, and how to comply with the same.

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JOHN E. POTTER, Publisher,
No. 617 Sansom-st., Philadelphia, Pa.

FRUIT AND ORNAMENTAL TREES
FOR THE AUTUMN OF 1860.

ELLWANGER & BARRY invite the attention of Planters, Nurserymen, Dealers, &c., to the great stock of FRUIT AND ORNAMENTAL TREES, SHRUBS AND PLANTS, which they now offer. The season has been exceedingly favorable, and consequently the stock of all kinds is of the finest description.

Fruit Department.

STANDARD APPLE TREES, for Orchards, 3 to 4 years from bud and graft.

DWARF APPLE TREES, for Gardens, on Paradise and Doucin Stock, 1, 2, and 3 years from bud.

PEARS, on Pear stock, 2 to 3 years from bud.

PEARS, on Quince stock, 1 to 4 years from bud.

CHERRIES, on Mazzard stock, 2 years from bud.

CHERRIES, on Mahaleb stock, 1 and 2 years from bud.

PLUMS, Standard and Dwarf, 1 and 2 years from bud and graft.

PEACHES, NECTARINES, and APRICOTS, 1 year from bud.

QUINCES, Orange, Portugal, and Rea's Seedling.

FILBERTS, SPANISH CHESTNUTS, MADEIRA NUTS, (English Walnuts.)

HARDY GRAPES, for the Garden and Vineyard, including Delaware, Diana, Concord, Rebecca, and all others of value.

FOREIGN GRAPES, (for Vineries,) 1 and 2 years from eyes. Strong, well ripened plants, in pots, of all the best old and new varieties, including Buckland's Sweetwater, Muscat Hamburg, Golden Hamburg, Lady Downs, &c., &c.

STRAWBERRIES—All the best sorts in Cultivation, old and new.

BLACKBERRIES—New-Rochelle, or Lawton, and Dorchester, (the largest stock in existence.)

RASPBERRIES—A general collection, including those fine new everbearing sorts, "Belle de Fontenay" and "Merveille de quatre Saisons."

GOOSEBERRIES—The best English sorts, and an immense stock of the American Seedling, that bears most profusely, and never mildews.

CURRANTS—White Grape, Cherry, Victoria, Black Naples, and all other valuable old and new sorts.

RHUBARB, including Linnæus, Prince Albert, Giant Victoria, and many others.

NOTE—No pains are spared by the proprietors and their assistants in the Fruit Department, not only to ensure accuracy, but also to adapt the stock, as regards varieties, to the wants of the various portions of the country as far as practicable.

Ornamental Trees.

The stock is immense, all well grown, and in perfect health and vigor. Nurserymen, Dealers, Landscape Gardeners, Park and Cemetery Companies, and gentlemen about to improve their grounds, are all invited to examine it.

DECIDUOUS TREES—Elms, Maples, Cypress, Catalpas, Horse Chestnuts, Larch, Laburnums, Lindens, Magnolias, Mountain Ash, Tulip Trees, Salisburia, Poplars, Thorns, &c., &c., of all sizes.

WEEPING TREES—Ash, Birch, Elm, Linden, Mountain Ash, Poplar, Thorn, Willow, including the American and Kilmarnock.

EVERGREEN TREES—Arbor Vitæ, (American, Siberian, and Chinese,) Red Cedar, Common Juniper, Balsam Fir, European Silver Fir, Norway Spruce, Red American Spruce, African or Silver Cedar, Japan Cedar, (Cryptomeria.) Pines, (Austrian, Scotch, Benthamiana, &c.,) Yews, (English and Irish.) Tree Box, Mahonia, Washingtonia, or "Big Tree" of California, and many other California Evergreens.

FLOWERING SHRUBS, including all the finest new varieties of Althea, Calycanthus, Flowering Currant, Deutzia, Loniceras, Lilacs, Spiræas, Syringas, Viburnums, Wiegeleas, &c., &c.

CLIMBING SHRUBS—Such as Honeysuckles, Bignonias, Aristolochia (Pipe vine,) Clematis, Ivy, &c.

ROSES—A great stock, both on their own roots, and budded on the famous Manetti stock. This cultivation is the largest of the kind in the Union, covering 6 to 8 acres of ground annually, and forming a speciality in itself. All the fine new sorts are annually imported, and poor ones discarded as soon as proved. The best only are grown in large numbers

PÆONIES—(Herbaceous,) a superb collection of upwards of 80 varieties in 3 classes.

PHLOXES—A collection of 140 beautiful varieties in 3 sections

CHRYSANTHEMUMS—Fifty selected best sorts of the Large and Pompone classes.

CARNATIONS, Picotees and Monthly Carnations, a fine stock.

HOLLYHOCKS—Superb double varieties of all colors.

DAHLIAS—A select assortment of the best varieties, the prize varieties are annually imported.

HARDY BORDER PERENNIAL PLANTS—Over 500 species and varieties. During the past four or five years we have given this class of plants special attention, one of our most competent men has had charge of it, and we have been constantly adding such desirable plants, as we could find.

HARDY BULBS—Such as Hyacinths, Tulips, Crocus, Crown Imperials, Jonquils, Lilies, &c., imported annually from Holland, ready to send out in September.

SUMMER AND AUTUMN FLOWERING BULBS—Such as Gladiolus, Japan Lilies, Amaryllis, Tigridias, Tuberoses, &c., by the dozen, 100, or 1,000.

GREEN-HOUSE AND BEDDING OUT PLANTS, of all the popular classes grown extensively and sold cheap.

Stocks for Nurserymen.

PEAR SEEDLINGS, 1 year from seed bed.

MAZZARD CHERRY, 1 year, strong.

MAHALEB CHERRY, 1 year, strong.

COMEWELL WILLOW, to graft the Weeping sorts on.

All parties interested are solicited to examine the stock and prices.

The following Catalogues are sent free, post-paid, to all who apply, and enclose one stamp for each.

No. 1, Descriptive Catalogue of Fruits, new edition, 1860.
No. 2, Descriptive Catalogue of Ornamental Trees, new edition, 1860.
No. 3, Green-House and Bedding-out Plants, Spring of 1860.
No. 4, Wholesale or Trade Catalogue, just published.

ELLWANGER & BARRY,
MOUNT HOPE NURSERIES, ROCHESTER, N. Y.

TREES.

FRUIT FOR SUMMER
AND
A GARDEN FOR WINTER.

PARSONS & CO.,
FLUSHING, near New-York.

Invite the attention of dealers and private growers to their large stock of well grown and thrifty fruit trees, at greatly reduced prices.

APPLE TREES—Standard—Of fine size. $14 per 100.

APPLE TREES—Dwarf.

PEAR TREES—Standard—All the desirable sorts. $30 per 100.

PEAR TREES—Dwarf—Three to four years old. $30 per 100.

PEACH TREES—on Peach Stock—One and two years old. $10 per 100.

PEACH TREES—on Plum Stock—Pruned for Pot Culture.

CHERRY TREES—Two years old, of the best varieties and very thrifty, $20 per 100.

CHERRY TREES—Early Richmond. $15 per 100.

GRAPE VINES—Native:

Diana, Delaware, Logan, Rebecca, Anna, Hartford Prolific, and all the other desirable sorts. For prices see Catalogues.

GRAPE VINES—For House Culture:

Black Hamburg, and all the best varieties, grown in large pots, with special reference to the formation of roots. For prices see Catalogues.

RHUBARB—Linnæus at $50 per 1000, and all other good sorts at low prices.

CURRANTS—All the best sorts, at $5 per 100 and upwards.

RASPBERRIES, STRAWBERRIES, GOOSEBERRIES, BLACKBERRIES, &c.

For Orchard Houses.

PEACHES, PEARS, PLUMS, NECTARINES, CHERRIES, and APRICOTS, in Nursery rows, carefully pruned for Pot culture. $1 each, $80 per 100.

THE SAME FRUITS IN POTS a foot in diameter, and ready for immediate fruiting, $2 each.

FOR THE LAWN, GARDEN, OR PARK.

All the well known Deciduous Trees and Shrubs, as Maples, Oaks, Lindens, &c., and a large number of new and beautiful varieties gathered by their collectors, or imported from Europe. As one of the proprietors has recently visited all the best European establishments, and selected from each all that was worthy of cultivation, they may safely assume that their stock is richer in beautiful novelties, than any one from which they selected, because they appropriated the riches of all.

To enumerate these would require too much space here, and they will be found in the catalogue.

They would call attention to their large variety of rare and beautiful EVERGREENS for a

WINTER GARDEN,

Where, instead of the leafless desolation which generally reigns seven months in the year, every gentleman may surround himself, even in the depth of Winter, with all the fresh greenness of Spring and Summer.

The RHODODENDRONS are unrivalled for this purpose. They present a mass of rich and glossy foliage for Winter, and for Summer a gorgeous display of flowers. These make the finest undergrowth, while for TREES, there are the robust NORWAY SPRUCE, the graceful HEMLOCK, the feathery HIMALAYAN PINE, the various PICEAS, and the glossy AMERICAN HOLLY. Masses or groups of PODOCARPUS, JUNIPERS, and YEWS, are effective upon the lawn, and single specimens of each evergreen upon the catalogue, will add to the effect.—For our climate and long Winters there is nothing that will compare with a garden of evergreens, unless it is a

GARDEN OF GLASS,

Where, in apartments of various temperatures, all the fruits and flowers of tropical climates can be grown in profusion.

To those who intend to erect such houses, we shall be happy to show our structures adapted to each class of plants, and to show also the young and thrifty saleable plants of more than a thousand varieties, from the glossy leaf and varied flower of the well known Camellia, to the more rare and curious Orchids, and the novel foliage plants, whose leaves present the delicate or gorgeous coloring of flowers, and are beautiful, not only for a short period of bloom, but throughout the whole year. For blooming under glass, or for BEDDING upon the lawn, a large variety of plants is cultivated in quantity; and for the

ROSE GARDEN,

Some five hundred of the choicest varieties have been selected, and are cultivated on their OWN ROOTS, at very low prices.

Catalogues will be furnished to all who apply by mail to

PARSONS & CO.,
Flushing, N. Y.

TREES! TREES! TREES!
For the Autumn of 1860.

The Subscribers, grateful for past favors, and encouraged with a larger and better assortment than ever, ask the attention of Nurserymen, Dealers, and Planters, to their immense stock of well grown trees and plants, comprising

APPLE TREES—Standard and dwarf, strong and healthy, with "King of Tompkins Co." and other good sorts in large supply.
PEAR TREES—Dwarf, a splendid stock, one, two, and three years; fine, strong and healthy trees, of the most approved sorts, on the quince.
PEAR TREES—Standard, a large and fine assortment of the most desirable kinds.
CHERRY TREES—Standard and dwarf, one, two, and three years, a large stock and beautiful trees. Early Richmond by the 100 or 1000.
PEACH TREES—One year; Plum, two years; Orange Quince, Apricots, and Nectarines.
CURRANTS—Red and White Dutch, Victoria, Cherry, and White Grape, with other sorts.
GOOSEBERRIES—Hougton seedling and best English varieties.
RASPBERRIES—Large quantities of such kinds as Orange, Belle de Fontenay, Franconia, Antwerps, &c.
BLACKBERRIES—Lawton, largely; Dorchester and Newman's Thornless.
RHUBARB—Myatt's Linnæus, Cahoon's Mammoth, and Downing's Colossal.
GRAPE VINES—Delaware, Diana, Concord, Hartford Prolific, Rebecca, Logan, and many other new and old sorts, in large quantities, large plants, one and two years old, grown in the open air, and in large pots under glass—also

FOREIGN VARIETIES

for cultivating under glass, of the best kinds, such as Stockwood Golden Hamburgh, Bowood, Muscat, Muscat St. Laurent, Black Hamburgh, Zinfindel, Royal Muscadine, and 30 others of the best varieties, one and two years old; for

ORCHARD-HOUSE CULTURE

We have a fine lot of these in extra large pots, for *immediate fruiting.*

EVERGREENS—Norway Spruce, Balsam Fir; Scotch, Norway, Austrian and White Pines; Red Cedar, American and Siberian Arbor Vitæ, Junipers, &c.
DECIDUOUS TREES AND SHRUBS—Horse Chestnut, Mountain Ash, European and American Linden, Maples, American Chestnut, American and European Ash, Judas Tree, Laburnum, Snow Ball, Purple Fringe, Altheas, Spireas, &c.
ROSES—Climbing and Hybrid Perpetuals, a fine assortment of strong plants.
HEDGE PLANTS—American Arbor Vitæ, Red Cedar, Privet, Honey Locust, &c.
STOCKS FOR NURSERYMEN—Angers Quince, Pear, Plum, Mazzard and Mahaleb Cherry, one year, and Apple Stocks, two years.

Packing will be done in the best manner for all parts of the country.

Descriptive Catalogues furnished—Wholesale Catalogue in August. T. C. MAXWELL & BROTHERS,
Geneva, Ontario Co. N. Y., July 20, 1860.

Genesee Valley Nurseries.
ROCHESTER, N. Y.

FROST & CO., Proprietors of the Genesee Valley Nurseries, Rochester, N. Y., offer for sale for the Autumn of 1860, and Spring of 1861, one of the largest stocks of STANDARD AND DWARF FRUIT TREES, SMALL FRUITS, ORNAMENTAL TREES, SHRUBS, ROSES, PLANTS, &c., in the United States. The Grounds at the present time contain over

THREE HUNDRED AND FIFTY ACRES,

devoted entirely to the cultivation of trees and plants. The stock is so extensive in its different departments, that they are enabled to furnish the entire orders of their correspondents of the different kinds, of the best quality, and at the lowest market prices. Trees and Plants are packed in such a manner, that they will reach the more distant parts of the United States in perfect condition.

Orders from Nurserymen, Dealers, and others, who may wish to purchase in large quantities, are executed with care and dispatch, as well as those who may favor us with the smallest orders.

CATALOGUES.

The following Catalogues contain full particulars of the stock in the different departments, and will be furnished gratis to all applicants who enclose a postage stamp for each:

No 1.—Descriptive Catalogue of Fruits.
No. 2—Descriptive Catalogue of Ornamental Trees, Shrubs, &c., for the Autumn of 1860 and Spring of 1861.
No. 3—Catalogue of Dahlias, Verbenas, Green-House and Bedding Plants.
No. 4—Wholesale Catalogue or Trade List, for Nurserymen and Dealers, and others who may wish to buy in large quantities, for Autumn of 1860.
No. 5.—Catalogue of Flowering Bulbs.

Address FROST & CO.,
Genesee Valley Nurseries, Rochester, N. Y.

New-Canaan Nurseries.
3½ MILES FROM NORWALK.

The Subscribers would invite attention to their Nursery Stock, all of which has been grown under their personal care.

Consisting in part of the following, viz.:

40,000 Apple Trees, suitable for orchard planting, of thrifty growth and popular varieties.
10,000 Pear Trees, Standard and Dwarf.
75,000 Peach Trees, 1 year from the bud
20 000 Cherry Trees, 2 and 3 years from the bud.
5,000 Hartford Prolific Grape Vines.
Concord, Diana, Delaware and Rebecca in limited quantities.

Also the smaller fruits, such as the Strawberry, Raspberry, Blackberry, and Currants, in variety, &c., &c.

A large stock of Evergreen and Deciduous Ornamental Trees.
STEPHEN HOYT & SONS, New-Canaan, Ct.

MORRISTOWN NURSERIES.—50,000 Peach Trees, healthy and vigorous, fully equal to any former growth, offered to the trade on the most favorable terms, to clear a piece of ground. No disease known in these nurseries. Send for a Circular, enclosing stamp Address
WM. DAY, Morristown, N. J.

To Nursery and Seedsmen.

Now Ready:
CATALOGUE of Dutch Flower roots, Wholesale. Hyacinths, Tulips, Crocus, etc., at very low rates.
CATALOGUE of fruit, tree, and shrub seeds—over 250 kinds. Cherry stones now ready.
CATALOGUE of seedlings and small nursery stock. Cherry stocks are very fine and cheap.
CATALOGUE—Retail—of bulbs and flower roots.
Other Catalogues in season.

Germantown and Wissahicon Nurseries, Germantown, Pa.
THOS MEEHAN, Prop.

RUSSIA OR BASS MATS, SELECTED expressly for budding and tying, GUNNY BAGS, TWINES, HAY ROPES, &c., suitable for Nursery purposes, for sale in lots to suit by . D. W. MANWARING, Importer,
248 Front Street, New York.

New and fine Varieties of Strawberries.

The subscriber is now prepared to take orders for the following varieties:

AUSTIN, $4 per doz, or $25 per hundred.
ATHLETE, a superb seedling from Easton, Pa., very large and fine, per doz. $1.
VORIS QUEEN, originated at New-Rochelle, one of the finest new American Seedlings. Very large, great bearer, and of the finest flavor. A splendid market variety, per doz. $1.
STATEN ISLAND, a new native seedling of great promise, superior to the Wilson, very large, productive, and of superior flavor, per doz. $1.
DOWNER'S PROLIFIC, said to be the finest seedling of 1859, per doz $1.
WESTCHESTER, a seedling of the Wilson, and much superior to that fine variety; it partakes of its parent's bearing qualities, is much larger, very sweet, and more solid, color dark crimson throughout; it is believed by good judges, that the Westchester will become a very popular market berry. Price per doz. $2; per hundred $10.
BOYDEN'S MAMMOTH, a monster in size, DELICE D'AUTOMNE, very large and fine, and TROLLOP'S VICTORIA, at 50 cents per doz.
WILSON'S ALBANY, strong plants and true, SCOTT'S SEEDLING, and PEABODY, at $1 per hundred, or $7 per thousand. Address WM. S. CARPENTER,
468 Pearl-st., New-York.

The Bartlett Strawberry.

The Subscriber, having thoroughly tested this new strawberry for some three years past by the side of the most esteemed known varieties, can confidently recommend it as one of the best, either for the garden or market. It is a large variety, flowers perfect, nearly as productive as the Wilson, but EVERY WAY SUPERIOR TO IT in quality. Its firmness and fine crimson color will give it a high place as a market fruit, and it is believed that the Bartlett Strawberry will be found among strawberries, what the Bartlett Pear is among pears, AN INDISPENSABLE VARIETY FOR GENERAL CULTIVATION.

Price $1 per dozen; sent free by mail $1.25 per dozen. Per hundred $5.00. Address ANDREW S. FULLER,
Brooklyn Nurseries, Brooklyn, L. I.

Strawberries! Strawberries!!

"By their fruits ye shall know them"

What Strawberry shall I plan:? Why! the Wilson's Albany —Why? Bceause it is the most productive, the largest, and finest berry out. In fact it is the "fashionable" berry.

Originated at the Albany Nursery, where plants can be procured by addressing JOHN WILSON, Albany, N. Y.

Price per 100 plants.................................$1
do 1000 do 8

Liberal discount to the trade.

THE SUBSCRIBER OFFERS FOR sale the following varieties of strawberries, which he warrants pure and genuine.

Wilson's Albany, Hooker, Scarlet Magnate, Peabody, at $1 per hundred.

Jenny Lind, Boston Pine, Brighton Pine, Ladies Pine, Delice d'Automne, Vicomptesse Herricart de Theury, Boyden's Mammoth, and many other popular varieties, at 50 cts. per doz.
ANDREW S. FULLER, Brooklyn, L. I.
Agent for C. W. Grant's Iona Nurseries.

CRANBERRY PLANTS.—1,500,000 Superior cultivated Cranberry Plants, of the celebrated BELL and CHERRY varieties, for sale at low prices. Also

The CRANBERRY CULTURIST, a practical Treatise on the Culture of the Cranberry, both Marsh and Upland, will be sent on receipt of 12 cents in Stamps to any applicant.
W. H. STARR, East New-London Nurseries,
New-Landon, Conn.

Cranberry Culture.

The subscriber is prepared to furnish plants the coming Fall, for high or low lands, in large or small quantities. Also will send Circulars in relation to the Cranberry, to all sending a post stamp to prepay postage. Address
SULLIVAN BATES, Bellingham, Norfolk Co, Mass.

Grape Vines. Grape Vines.
LARGE STOCK OF THE NEW DESIRABLE SORTS.
SEND FOR A CATALOGUE.

The Subscribers offer for sale a large and well grown stock of the new hardy Grape Vines at reduced prices, all propagated from genuine stock, consisting mostly of the following sorts:

Delaware, Diana, Rebecca, Hartford Prolific, Concord, Union Village, Oporto, Anna, Logan, &c.

The older sorts of Isabella, Catawba, Clinton, &c.

Foreign sorts for culture under glass of best sorts.

200 Acres of Fruit Trees in large or small quantities.

Greenhouse Plants, Hardy Border Plants, Bulhous Roots, Strawberry Plants, Raspberry of Everbearing and other good sorts.

Hedge Plants of the Honey Locust, hardy, makes a fine farm hedge. Address W. T. & E. SMITH,
Geneva Nursery, Geneva, N. Y.

TO PACK FRUIT and Delicate Vegetables.—The Granulated CORK is a perfect non-conductor and non-absorbent, and is found to preserve apples, grapes, peaches, tomatoes, to keep green corn from becoming heated, and to fill in ice houses, refrigerators, and to pack ice. For sale low by S. W. SMITH & CO., 43 Centre-st,, N. Y.

FARM PRODUCE
Sold on Commission,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.

ISAAC EMENS, 226 Front-st., New-York.
(SUCCESSOR TO THE FIRM OF HAIGHT & EMENS.)
Refers to the Editor American Agriculturist.
" E. R. Cooper, Cashier Market Bank, New-York.

TWO WORKS VALUABLE TO THE SICK OR WELL.

Sent by mail, no pay expected until received, read, and approved.

Address Dr S. S FITCH, 714 Broadway, New-York.

1st. SIX LECTURES on the causes, prevention, and cure of Lung, Throat, and Skin diseases; Rheumatism, and Male and Female Complaints. On the mode of Preserving Health to 100 years. 360 pages, 21 Engravings. Price 50 cents, in silver or P. O. Stamps.

2nd. A work on the Cause and Cure of Diseases of the Heart, Stomach, Liver, Bowels, and Kidneys; on Apoplexy, Palsy, and Dyspepsia; why we grow old and what causes disease. 131 pages, 6 engravings. Price 36 cents. Say which book you wish, giving name, state, county, town, and post office.

PROFITABLE Employment may be had by addressing (post paid) R SEARS 181 William-st, N, Y.

THE GREAT AUSTIN SHAKER SEEDLING STRAWBERRY.
THE LARGEST STRAWBERRY IN THE WORLD.

Amateurs consider this Seedling the greatest acquisition to our small fruits ever introduced. A monster in size, wonderfully prolific, and of the finest flavor. For particulars see *Agriculturist* for May. We are now prepared to take orders to commence delivering plants in August, in rotation as ordered, at $4.00 per doz., or $25.00 per hundred.

Address either
CHAUNCEY MILLER, Albany, N Y, Shaker Trustee; or,
WM. S. CARPENTER, 468 Pearl-st., New-York.

☞ We the undersigned having ordered largely of the plants of the Austin Seedling Strawberry, subject to a countermand, if not satisfied when seeing the fruit and plants in bearing, were induced to visit Watervliet, where it originated, and see for ourselves the true condition of this variety. We found it growing in the most common way, in masses, and not in hills, without any particular care, and much injured by the drought, yet the great productiveness, and uniform large size, and fine flavor induces us, to consider the Austin as one of the best varieties in cultivation, and a great acquisition to our small fruits. We found the Austin averaging considerably larger than the Wilson, and about as productive, and from appearances will continue to fruit into July.

JOHN C. THOMPSON, Tompkinsville, Staten Island, N. Y.
JAS. L. LOCKWOOD, Stamford, Ct.
EDWARD BISHOP, Stamford, Ct.

Strawberries.
Wilson's Albany Seedling.

This Strawberry is still unrivaled in productiveness Its yield this year has been greater even than last, when it produced over

THREE HUNDRED BUSHELS TO THE ACRE!

Price of Plants, $4 per 1,000, packed and delivered at the Railroad Depot or Express Office in this city. In quantities of 5,000 and upwards a liberal reduction in price will be made. The Money must in all cases accompany the order. Orders for ANY QUANTITY can be filled any time the coming fall or spring.

HOOKER'S AND PEABODY'S SEEDLING

At same price.

Utica, N. Y., August, 1860. T. BUCHANAN, JR.
REFERENCE—EX-GOV. HORATIO SEYMOUR, Utica, N. Y.

Wilson's Albany Seedling.
Hooker's Seedling!!

Strong, selected new plants of these desirable varieties, warranted true to name, carefully packed so as to insure safe transportation for any distance at $7 for 1000; $4 for 500, or $1 for 100, for sale by WM. RICHARDSON,
Riverview, Albany, N. Y.

Raspberry and Blackberry Canes—all the desirable varieties for sale.

☞ STRAWBERRIES. ☜

We will deliver free of charge to any Post Office or Express Office (at our option) in the United States, at the prices named, any of the following select varieties of Strawberry plants Viz.
Wilson's and Peabody's at 50 cts. per Doz., or $2 per Hundred.
Downer's and Chorlton's at $1 per Doz., or $6 per Hundred.
The Great Austin Seedling at 50 cts. for 1 plant, or $4 for 1 Doz.
Wilson's and Peabody's, delivered here, at $4 per Thousand.

Address I. W. BRIGGS,
West Macedon, Wayne Co, N. Y.

SMALL FRUITS.

We have an immense stock of SMALL FRUITS for sale during the Autumn of 1860 and Spring of 1861.

In addition to the more common sorts of NATIVE GRAPES we have over 25,000 plants of such desirable sorts as Delaware, Concord, Diana, Rebecca, Hartford Prolific, Early Northern Muscadine, Logan, and 20 other sorts—strong vines for out-door culture. Of FOREIGN GRAPES we have 35 sorts, one to two years old, for Hot or Cold Vineries, or for fruiting in pots.

An extensive stock of each of the common sorts of CURRANTS, one or two years old, and fine one year old plants of White Grape, Victoria, Cherry, &c.

Fine and well grown GOOSEBERRY plants, of the American and Houghton Seedling, which never mildew, as well as the best English sorts most suitable for this climate.

A great stock of RASPBERRIES, such as Red Antwerp, (Hudson River,) Yellow Antwerp, Orange, Franconia, Knevett's Giant, &c., including several thousand of the Autumn bearing kinds, Belle de Fontenay, Murvel of 4 Seasons, and others.

STRAWBERRIES—The most extensive stock of saleable plants and varieties—comprising over 60 sorts—in the Union.

Fine BLACKBERRIES—New-Rochelle and Dorchester, in large quantities.

Also, FIGS, FILBERTS and MULBERRIES.

Orders from Nurserymen, Dealers, and others, who may wish to buy in large quantities, as well as those who may favor us with the smallest orders, will be executed with care and dispatch.

CATALOGUES containing description, with prices at retail, and No 4 Catalogue, offering plants in large quantities, sent on application containing a postage stamp for each.

FROST & CO.,
Proprietors of the Genesee Valley Nurseries,
Rochester, N. Y.

SEED WHEAT—SEED WHEAT—SEED WHEAT.

RED MEDITERRANEAN,
BLUE STEM,
SOULES.

Choice berry and extra cleaned, all other varieties furnished.

SEED RYE—SEED RYE—SEED RYE.

A general assortment of Garden, Field, and Flower Seeds.
R. L. ALLEN, 191 Water-st., New-York.

HORSE POWERS AND THRESHERS.—Endless Chain and Circular Powers of our own and other patterns, a large variety at manufacturers' prices.
R. L. ALLEN, 191 Water-st, New-York.

Griffing's Improved Potato Digger

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1861.

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We have no other expectation than to labor as long as we live for the instruction and entertainment of our readers, and we hope fully to repay any effort they may make to extend the circulation of this journal.

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VOL. XIX.—No. 10. NEW-YORK, OCTOBER, 1860. [NEW SERIES—No. 165.

☞Office at 41 Park-Row, (Times Building.)
☞Contents, Terms, &c., on pages 316-20.

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October.

"All through the night
The subtle frost hath plied its mystic art,
And in the day the golden sun hath wrought
True wonders; and the wings of morn and even
Have touched with magic breath the changing leaves.
And now, as wanders the dilating eye
Athwart the varied landscape circling far,
What gorgeousness, what blazonry, what pomp
Of colors, burst upon the ravished sight!"
GALLAGHER.

What a change has come over the face of Nature! The waving forests, so lately robed in deepest green, have assumed the gorgeous coloring of October. The foliage does not fade but brightens into death. The last days of the leaves are their best in beauty, violet, pink, scarlet, crimson, as if their life blood were oozing from every pore. Nothing but observation could teach us that all this brilliancy and glory heralded death. It would seem that they were entering upon a new life, instead of being pushed off the stage to make way for a new generation.

The year has culminated in field and forest, and the farmer is gathering in his harvests. The first frosts have come, and you see the small hoar crystals glittering in the morning sun upon the grass and along the fences. The pumpkin and squash vines are the first to feel its power, and the broad leaves droop and turn black, as the sun comes up, leaving the yellow globes, and the crook-necks all exposed. The farmer hardly knew how rich he was, until the frost cleared away the luxuriant mass of foliage. Now the potato patches and the edges of the corn fields and the gardens are yellow with the raw material of pumpkin pies, and Thanksgiving. The orchards feel the chill breath of the frost, and you hear the apples dropping under all the trees, as if seeking warmer quarters in the thick grass beneath the branches. The apples are abundant in almost all parts of the country, and the poorest families can lay in their Winter stores of Greenings, Pippins, and Spitzenbergs. An orchard loaded with fruit, and ripening in the October sun, is one of the finest sights in the country. Here is a tree blushing in every bough with the crimson fruit, and there they hang in long yellow bunches waiting for the basket. The Winter fruits are not harmed by the early frosts, and they will adhere to the branches until it is time to remove them by hand. The finishing touches to the flavor of the late fruits are given in the last few days of the season. If plucked too early, they shrivel, and do not ripen well in the cellar or fruit room. This is the reason why some condemn certain very fine Winter pears. In some cases, the season is too short for them to reach maturity, in others, they are removed from the tree full two weeks before the close of the season. Most of the Winter varieties of pears and apples are furnished with a thick foliage which adheres longer than on the Summer varieties, to afford protection to the fruit. We have sometimes left the Glout Morceau as late as the middle of November, with the best results. The picking, storing, and ripening of Winter fruit is an art that can not be learned in a single season.

With the harvest moon, come apple parings, and huskings, words full of meaning to the old men, if not to the boys. We see now the ample farmer's kitchen, and the bushel baskets heaped with apples, and the merry group of lads, and lassies, seated for their work. There were at least a dozen of them gathered from the neighbors to lend a helping hand in preparing "the apple sass." It is now called apple butter, and, by some very proper people "sauce." A barrel, at least, was to be prepared from the green or rather fresh-pared sweet apples, and large stores of dried apples were to be laid up for Winter use. The head of the household, as was meet, used the paring machine with three-tined fork and knife that cut the skin as thin as a wafer. The pared apples fell with wonderful rapidity into a large tub, and were thence distributed among the young folks, to be halved, quartered, cored, and strung upon twine about two yards in length, for drying. The strings of apples, as they were finished, were put upon hooks in the ceiling, or upon poles ready to be removed in the morning to the sunny side of the house, where they hung in graceful festoons, the special delight of wasps and flies. With a huge pan of apples between a young couple, the work went on merrily, if not rapidly; jokes flew back and forth, sometimes emphasized with apple seeds, and sometimes with something softer. Rustic awkwardness in company was happily overcome, for there was a place for the hands, and the hands had something to do. The tongues were unloosed, first about the work and the company, and then about something that might have been very hard work, under other circumstances. Wholes in the pan were halved, and disconsolate halves, out of it, were eventually made whole. Work and wooing went together in those good old times, when the kitchen was better known than the parlor, and the presence of the "old folks at home" did not spoil the freedom and frolics of their children.

The last apple being pared, and the last festoon hung up duly in its place, there was a resort to fortune telling. The rind of the apple being passed three times round the head and dropped, invariably gave the first letter in the name of the successful lover. As the coil of rind almost always made an S, or something that squinted that way, it was easy to worm the secret out of the most bashful swain, and point out to him his intended Sarah or Sophia. These prophecies of the farmer's fireside sometimes turned out alarmingly correct, and were followed by wedding occasions and new homes.

The huskings in the long evenings of the harvest moon were larger gatherings, and not usually cheered by the presence of the fair, until supper time.

"From many a brown old farm house,
  And hamlet without name,
Their milking and their home tasks done,
  The merry huskers came.

Swung o'er the heaped-up harvest
  From pitchforks in the mow,
Shone dimly down the lanterns
  On the pleasant scene below;
The growing pile of husks behind,
  The golden ears before,
And laughing eyes, and busy hands
  And brown cheeks glimmering o'er

Half hidden in a quiet nook,
  Serene of look and heart,
Talking their old times over,
  The old men sat apart;
While up and down the unhusked pile,
  Or nestling in its shade,
At hide-and-seek, with laugh and shout,
  The happy children played."

In the warm frostless evenings, such as we often have in this month, the scene was not laid upon the barn floor, but under the open sky, the full moon giving plenty of light for the huskers When the work was done, the company adjourned to the house, and tea, coffee, cakes, and cheese, were served up in rustic style. These "bees" as they were sometimes called, were kindly in their influence. They often helped a short handed neighbor in his harvest and were happy social gatherings. The modern dances already becoming too popular among our rural population are poor substitutes for these primitive, and simpler, but more natural and enjoyable festivities of the olden time. For these there needed no display of expensive dress and dazzling jewelry, which are too often the regalia of idleness and vice. "The apple paring" and "the husking bee," are pleasant October memories with us. With a little re-modeling to adapt them to the changing times, they ought to be perpetuated among the cherished institutions of farm life. With our bountiful apple crop, and almost unprecedented yield of corn, in all the North and East, we shall have ample material, and joyful occasion "to show" up these institutions.

Calendar of Operations for Oct., 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45° ; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the North, and later for the South.

EXPLANATIONS.—*f* indicates the *first* ; *m* the *middle* ; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated ; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

Most of the accounts with the fields are to be closed this month. There is yet a balance due the farmer of sundry potatoes, beets, turnips, etc., to be drawn from the ground, and if he have not been in season with his work, the unhusked corn will soon be suffering from rain and from vermin. Preparations are to be made for the approaching inclement season, and no time is to be lost. There is comfort as well as economy in having every thing *snug* for the Winter.

Buildings need thorough examination and repair before the driving storms have damaged the gathered crops. Every crack in the horse and cattle stalls, where the cold wind can enter, will cost many pounds of hay before Spring. See that roofs are tight, and put doors, shutters, hinges, fastenings, etc., are all in good order. Provide sufficient shelter for all animals. If paint is needed, now is a good time to apply it.

Cattle—Do not wait until grass fails entirely before commencing to feed. A gradual change to dry food is best. There will be much refuse from the garden and root fields that can be turned to good account. Pumpkins are excellent for fattening purposes. Remove the seeds before feeding. Beeves for slaughtering should be put up early, they will fatten more readily than in cold weather. Allow free access to water.

Butter—Continue to pack for Winter use. Keep up the flow of milk by daily allowance of green food and pumpkins.

Cellars—Attend to as directed last month. Examine the drain, that no water remain. Good ventilation is particularly needed where roots are stored, as they give off much moisture.

Cisterns—A convenient supply of water for the stock may be obtained by constructing a cistern to receive the drip from the barns and sheds. This will also save much manure now wasted by washing away.

Corn—Have all husked and under cover before inclement weather. Select the best ears from the most prolific stalks for seed. Secure all stalks, leaves and husks, for fodder. Some of the husks may be selected for filling mattresses. Slitting them into shreds for this purpose, will be good employment for the boys on rainy days. See that corn is sufficiently dry before putting it into tight bins. Well ventilated cribs are safest.

Draining may still be attended to until the Fall rains. See that the drain furrows in grain fields are well opened.

Farmers' Clubs—The lengthening evenings afford a good opportunity for these profitable meetings. Invite your neighbors to join you, if one be not already organized.

Forest Leaves are excellent for bedding, and manure. Provide a large supply under cover, for use as wanted.

Grain—Thresh out, ff, if not done. Secure the straw under cover, or by careful stacking, for cutting and feeding, or for bedding and manure.

Hemp—Harvest, ff, m.

Hogs—Commence feeding for fattening, ff, giving cooked food. Supply with leaves or straw for bedding, and keep the yard well covered with muck for manufacture of manure.

Ice Houses—Build, convenient to the house and dairy room. A cellar is not needed ; one may be cheaply made in a corner of the wood-house or out-building. Provide for thorough drainage and ventilation.

Manures—Continue to gather supplies of muck until sufficient is collected to absorb all liquids from the stables, yards, pig-pens, and sink. Collect leaves for bedding and for composting. Throw all refuse turnip tops, and other trimmings of vegetables, with weeds and other waste matter, into the manure cellar or heap.

Newspapers and Books—The long winter evenings will soon afford ample time for reading. No crop pays better than the thought crop. Subscribe for agricultural and other journals in which the whole family may be interested, and add useful books to the home library.

Plowing stiff clay soils in the Fall, leaving the field in ridges, secures the beneficial action of frost in pulverizing the lumps and destroying insects.

Potatoes—Complete digging, f, m, before they are injured by frost. Store in dry well ventilated cellars. Do not leave them exposed in the sun after digging. Remove tops and weeds to the manure heap.

Poultry—See that the houses are cleaned of all vermin and accumulations of manure. Give them a good coat of whitewash. Provide a good supply of gravel for Winter use. Feed them meat chopped fine with their grain, and also green food, as cabbage leaves, etc. Pack a full supply of eggs in salt, or pickle in lime water for Winter.

Pumpkins—Store them, f, m, before injured by frost. Handle with care to prevent bruising. Feed plentifully to milch cows and other stock.

Roads—Put in thorough repair before the rains and frosts make them almost impassable. Better to work a few days extra, than suffer the inconvenience and damage of broken bridges and slough holes through the Winter.

Root Cellars are easily constructed as described on a subsequent page. It is preferable, however, to have an apartment for this use under the barn.

Sheep—Keep them in thriving condition by an occasional allowance of hay, roots, and grain, as the grass fails. A gradual change of food is best. Salt them at least once a week. The males should not be turned with the ewes until later in the season.

Sorghum, Sugar Cane—Cut as soon as fully ripe, and manufacture syrup and sugar. It is better to express the juice immediately after cutting, but if the stalks are protected from rain and frosts, they will yield a good article for several weeks.

Tools—Collect and put all implements in their proper places under cover. Put all in good repair during rainy weather, repaint wood-work, clean all iron and steel surfaces, and coat them with a mixture of oil and resin to keep from rusting.

Trees—Plant for ornament, for shelter, and for shade, about the buildings, along the roads, and in waste spots in the fields.

Winter grain may still be sown at the South. In this latitude it should have been finished by September 20th.

Orchard and Nursery.

Trees and shrubs have now completed their season's growth, and are preparing for the Winter rest. The fall of the leaves gives the signal that the time for transplanting has arrived, and the nurseries will soon present a busy scene. If every man who *ought* to plant a tree, should send in his orders this Fall, there would be such a demand as has never been witnessed. Thousands of homesteads need them for shade and for shelter. Many farms, perhaps the majority, have no orchard worth the name, and hundreds in the vicinity of cities, who now barely make ends meet by cultivating grain, might, in a few years, acquire wealth by raising fruit. We urge all our readers who have available space, to at once commence the work of tree planting—raising living monuments that shall long keep their memories green.

Apples for cider-making and for Winter use are to be gathered this month. Handle with care all that are to be kept—every bruise insures speedy decay. Spread them in a cool place to *sweat* before packing in barrels. The inferior kinds are valuable for drying. Read articles "Save the Fruit" and "Frames for Drying Apples," on page 310, this No. Save seeds for planting, and cover them with earth before they dry. Set additional trees in vacant spots in the orchard, and at convenient points along lanes, etc.

Cider—Use none but sound apples for making cider, and see that all are clean and free from leaves, etc., before they are crushed. It is *not* advisable to use sulphite of lime to keep cider sweet, it makes an unwholesome compound.

Evergreens are best transplanted in May. If any must be removed now, use extra precautions to avoid injuring the roots.

Insects—It is not yet too late to examine for the borer, and other destructive insects. Follow directions of previous months.

Labels—Attach plainly marked labels firmly to all trees sent from or brought into the nursery, and also keep a record for reference should the label be lost.

Lands for Orchard or Nursery Planting—Manure thoroughly, plow and subsoil or trench well drained land, and prepare it for early Fall or Spring planting.

Manure orchard trees by spreading about them a compost of yard manure, muck and lime, or ashes. The Winter rains will carry it to the roots.

Mice are often destructive to young trees, by gnawing the bark. Break up their Winter quarters by removing all grass, weeds and rubbish from about the trunks. Where these, or rabbits are very troublesome, sheets of thick paper covered with coal tar and wrapped about the trunks, will be a good preventive.

Pears—Pick late varieties carefully, and lay them upon shelves to ripen. This fruit is excellent, preserved in bottles according to directions in previous numbers.

Pruning is better performed in July and August, but the present season is preferable to Spring.

Quinces—Gather and preserve or market as they ripen.

Seeds and Stones of Fruit—Sow early or put in boxes of earth, the seeds of apples, pears, plums, cherries, peaches, walnuts, chestnuts, butternuts, filberts, thorns, acorns, holly, beech, ash, maple, etc. Allow none of them to become thoroughly dry before planting.

Kitchen and Fruit Garden.

The remaining garden crops are mostly to be secured this month, before they are injured by frost. Winter Squashes, Cabbages, Potatoes, Beets, and other vegetables are to be marketed or housed, and a general clearing up of the grounds is to be made. Next Spring's work can be greatly forwarded now, by plowing, trenching, spading and preparing manures. Land trenched now, will be ready for early working next season, and the beneficial action of the elements through the Winter, will be much more effectual by turning it up loosely.

Asparagus—Make new beds if needed. Spade up the ground 18 inches deep, and dig in 4 to 6 inches of stable manure. Plant two-year-old roots a foot apart each way about 4 inches below the surface. A bed made in this way now, will afford a good supply in one year from the following Spring.

Beets—Pull before hard frosts, twist off the tops, and if the weather be fair, leave them to dry a day or two before storing. Feed the tops to milch cows.

Blackberries—Now is the best time for transplanting except in very cold latitudes. This fruit pays large returns in locations accessible to market.

Cabbages and Cauliflowers—Harvest, ll, except those planted latest. Set young plants in cold frames, m, l.

Carrots—Dig, cut off tops and carry to the cellar, m, l.

Celery—Earth up, ff, while dry. Keep the earth from falling between the stalks, by tying with soft strings which will not bruise the stalks. Harvest, ll.

Cold Frames—Prepare, m, ll, if not already done, to protect lettuce, cabbage, cauliflower, etc., in Winter.

Currants and Gooseberries—Transplant, m, l. Introduce improved varieties.

Fruit Trees—Plant hardy sorts, m, l.

Grapes—Those for Winter keeping should remain upon the vines until hard frosts are expected. Gather carefully ; cut out defective berries, and pack in cotton batting or between newspapers, in shallow, close boxes. Put in a dry place away from frost, and they will keep until January. See article on page 308 this No. Grape roots may be set out, m, l.

Mushrooms—Beds may be made any time during this month. Protect with a covering of straw any exposed beds, upon the approach of heavy frosts. New beds are better made under cover at this season. For full directions to make beds, see Volume XVI, page 262.

Onions—Those sown as directed last month, will need protection by covering with straw or litter, ll, say, an inch deep.

Parsneps are improved by remaining in the ground until Spring. Dig, ll, and bury in sand in the cellar those wanted for Winter use.

Raspberries are better planted in Spring, though hardy varieties may be put in, m, l. The tender sorts should be laid down and covered with an inch or two of earth

Rhubarb—Plant roots or crowns of the Linnæus variety, mm, l.

Salsafy requires the same treatment as parsneps.

Seeds—Collect and preserve any now ripening—see that all are properly labeled.

Spinach—Cover, ll, that sown last month, and sow seed, f, m, in cold frames. Weed and thin former sowings, cooking the surplus plants.

Squashes—Take in before they freeze, and keep in a cool dry place as long as may be, previous to putting in the cellar, or other Winter quarters. Handle carefully and they will keep until Spring.

Strawberry beds may still be set out, ff. Cover beds, ll, with tree leaves, or fine manure, to afford a partial protection, but do not smother by too thick a layer ; an inch is sufficient.

Tomatoes—Preserve an abundant supply in bottles or cans for Winter and Spring use. Just before frost, take a few vines having unripened fruit, transplant them to boxes and set in the cellar or other protected place, where much of the fruit will mature. The sound green fruit

Left after the vines are cut down by frost, will make excellent pickles.

Turnips—Gather and market or store early varieties, m, ll. Rutabagas and other late sorts may grow awhile.

Vegetables for Seed—Select the best sorts for raising seed next season, and store them separately.

Winter Cherries—Collect before frost for preserves, or leave them in the husks, to be used as wanted.

Flower Garden and Lawn.

The cool nights during the latter part of September, remind one that even the more hardy plants which are destined to bloom indoors during the Winter, should now be taken in and set by the side of the more delicate ones which were carried in last month. It is not best to risk them out much longer, as sharp frosts often occur during this season, which would materially injure the plants. The houses have doubtless been already put in perfect order and cleanliness in accordance with the directions of last month. It is also presumed that a generous supply of potting soil is stored under cover.

October is a good month for grading, trenching, and turfing, or seeding the lawn. If there is not time to trench, or the grounds are so large that the expense is too great, at least subsoil thoroughly, working in a generous supply of well rotted manure. Where turfing is used, let the sods be well beaten down, and sift in fine soil or sand, to fill any crevices. If grass seed is sown, mix in a little Winter rye to assist in protecting the roots during Winter. The sowing should be done early in the month. Perennial Rye grass will probably give better satisfaction than any other single sort. Roll the ground after sowing, and again just before hard freezing weather sets in.

The flower borders, and indeed the whole ornamental grounds are too frequently neglected late in the season, weeds taking the place of former bloom, and dried flower stalks and decaying leaves marring the beauty of the beds and grass plots. Carefully remove all offensive objects, raking the dry leaves from the lawn, cutting away the dead flower stalks. If a spot of ground is entirely bare of plants, spade it up, rake smoothly, and it will not offend the eye for several months during Winter.

Bulbous Flowers should now be set for early Spring bloom. They will flourish in a common garden soil, and richly repay the cost and trouble. A fine collection of hyacinths, tulips, crown imperials, lilies, iris, jonquils, narcissus, crocuses, and snowdrops, is a beautiful sight at any time, and the more so as they bloom early in the season, some of them while the snow bank yet lingers in the shade of the fences. A single bed can be made of all these varieties, or if the grounds are ample, it is well to devote a bed or plot to each sort. Spade deeply and trench if possible, working in a good quantity of fine manure. Plant the larger bulbs four inches deep and eight to twelve inches apart, using a little sand, if accessible, around and over the plant. The smaller crocuses and snowdrops may be set three inches apart and one inch deep. Of course, taller plants should be in the center, if the bed is circular.

Bedded Plants—Lift geraniums, verbenas, fuchsias, salvias, petunias, etc., and pot for Winter blooming. Cuttings may be made at the same time, placing them in pots or boxes at once.

Chrysanthemums now make a fine show of bloom, and are the more prized as annuals and other plants are mostly out of flower. Keep neatly tied up, and only cut away when actually killed by frost. Their rich colors and delicate shadings make them very attractive, and every garden should have a collection.

Dahlias and Gladioluses—Mark plainly before killed by frost, and remove to the cellar or other dry place where they will not freeze, ll.

Frames and Pits—Construct, f, m, to receive half hardy plants requiring partial protection. See that the drainage is perfect and place tender roses, verbenas, salvias, fuchsias, geraniums, etc., in them, ll.

Evergreens—This is not a good month in which to transplant them. Better defer the planting until Spring.

Hedges—Plant with deciduous trees and shrubs, m, l.

Perennial Flowers—Many of these do better when sown in the Fall, say, ff. Hollyhocks, wallflowers and a few others will bloom next season, if sown now.

Pinks, Carnations, etc.—Pot rooted layers and young plants and remove, m, l, to houses or pits.

Seeds—Save the late ripening, being careful to secure those which were marked as of peculiar beauty. Many flowers improve or deteriorate according as the finest or poorest seeds are saved for future sowing.

Shrubs—Plant Pyrus Japonica, Dwarf Almond, Hardy Azalias, Sweet Scented Shrubs, Scotch Broom, Mezereon, Forsythias, Flowering Thorns, Stuartias, Deutzias, Honeysuckles, Euonymus, Altheas, Hydrangeas, Glycine, Jasmine, Privet, Mahonias, Syringos, Flowering Currants, Purple Fringe, Spiræas, Snowberry, Lilacs, Viburnums, Roses, Chinese Weigelia, etc. These are desirable hardy shrubs, many of them blooming quite early in the season, and therefore do best with Fall planting.

Trees—Excepting evergreens, plant the hardy varieties as soon as the leaves fall. There is more leisure at this season, and many trees do better when planted early in the Fall. See if there are not a few vacant places about the buildings, in the yards, or along the avenues, where a few trees would add beauty to the place, break up the sameness, or afford a desirable shade from the sun, and screen from high winds. Do not plant *tall* trees too thickly near the dwelling. Set them a little in the distance, with shrubs near the buildings. It is desirable to have some sunshine and a circulation of air around the house.

Green and Hot-Houses.

Having followed the full directions of last month, putting the houses in order and carrying in those plants which would be injured by cold, the present labors will mainly be to secure the remaining plants, and potting and preparing for Winter. Some fire heat will be needed among the tropical collections, and those to be forced into early bloom. Care must be taken, however, not to excite a too hasty and weak growth, remembering that the atmosphere without is cool at this season, and that all changes should be gradual. With many of the plants a simple protection from frost is all that is now wanted, and for these no fire is needed.

In taking in the various collections, be careful to cleanse the pots from moss, weeds, etc., and see that no dead leaves or decaying branches are left upon the plants to taint the atmosphere with their impurities and offend the eye by their unsightliness. Cut or pinch back freely to make strong bushy heads, by inducing vigorous new shoots. In arranging them upon the shelves it is well to group them according to their habits, those which require much heat in one room, and plants requiring a more temperate atmosphere in another. They should, at the same time, be arranged with reference to their hight, the low growing ones in front, and the taller varieties back, or better still, have shelves arranged to rise above each other.

A large supply of potting soil should be in readiness, as there is much repotting to be done at this season, besides providing for a large number of seedlings and layers now in the open ground.

The houses will need syringing occasionally to keep up a humid atmosphere. It will also be beneficial in keeping down insects. As the plants are not growing vigorously, only a moderate supply of water will be required. It is better at this season to give it in the morning.

Ventilation should be properly attended to. More air is required for plants just brought in, than when they have been long in the house.

A few quick growing annuals should be sown at once, for a mid-winter bloom. They will come in well, and furnish a variety with the early and late flowering perennials.

Apiary in October.

BY M. QUINBY.

Letters from nearly every section of the Union announce the fact, that, notwithstanding the good crops generally, honey is almost an entire failure, except in a few places, consequently there will be a great many more light hives than usual; swarms that in ordinary seasons would have well filled their hives with stores, besides a large surplus in the boxes, will be found, when examined, to have insufficient for Winter. Neither have bees swarmed as usual in many places, which will make it desirable for those who wish to increase their bees, to Winter all that can possibly be put in condition to go through. Most of the swarms will be found populous enough to be wintered, if judiciously done.

First ascertain the amount of honey on hand by weighing all doubtful hives. Weigh an empty hive, add a half dozen pounds for the bees and combs—a little more if the combs are old; this subtracted from the weight of a full hive gives the amount of honey. In a latitude north of 42 degrees, much less than 25 lbs. will not do; a colony of bees when protected, will ordinarily consume 18 lbs., or 20 lbs. from October 1st to April 1st, and several pounds after that, if the Spring is unfavorable.

Honey should be used for feeding, when it can be had; sugar will do under some circumstances. In the Southern States, or where bees can have an opportunity to fly at least once a month, it will do to feed throughout the Winter. But where they are confined to the house for months, the feeding is apt to make them uneasy and to leave the hives. There is no better time than October to feed them. If honey from the West Indies, or that from hives where foul brood exists, is used, it should be scalded and skimmed, having water added to prevent burning. Feed as fast as possible till they are of the required weight; otherwise they may rear a large brood, and consume too much of your honey. A hive in which the combs do not reach the bottom, may have a shallow dish filled and set under the bees. Chopped straw, or shavings should be put on the top, to keep the bees from drowning something also at the side of the dish to assist the bees in climbing into it. It should be put under at night, and taken out in the morning, to prevent tempting the robbers. Bees are apt to become cross while being fed, and a little smoke will be needed to keep them quiet. If the hive is full of combs, the dish of honey may be placed on the top, allowing the bees to pass up through the holes. It may remain through the day, and be safe, if the cover can be made close enough to prevent other bees from scenting the honey. Boxes partly or wholly filled with surplus honey, when it can be spared for feeding, are very convenient to set on the hive. Cells that are sealed up, should be opened—the bees take out the honey more readily. Empty combs remaining in such boxes, should be left as they are, as a good start for another year. Sugar made into syrup, will answer as a substitute for honey, when the bees consume it at once, but if fed in quantities sufficient to be stored in the cells for some time, it may granulate and become useless to them.

Some bee keepers will have more light hives, than the honey on hand can bring up to the desired weight, and yet wish to keep as many as possible. Two can advantageously be made into one, when the contents of both are sufficient. The two swarms in one hive, will not consume as much honey as they would separately. The hives to be united, should be as near one size as possible. Beginners would like to work without danger from stings; they may paralyze the bees with either puff ball smoke or chloroform. To operate with either, the hive should be closed on all sides. If puff ball is used, dry it well, set on fire and enclose it in a tube one and a half inches in diameter—tin will make a good one—arranged so that the smoke may be blown into the hive through a hole in the side near the bottom; a ball near two inches in diameter will suffice for one swarm. As soon as it is done burning, close the hole, and let the hive stand 10 or 15 minutes, when the bees will be apparently quite dead, and while they are in this state, any operation may be performed. They revive in 30 or 40 minutes after the air is admitted, and must be confined to the hive for two or three hours, till they recover their senses. When puff ball can not be had, chloroform may be substituted—the effect is about the same. Saturate a damp sponge about the size of a hen's egg; cover this with a tin, well perforated, funnel shaped, or a wire cloth of such shape, to prevent the bees as they drop from covering it too closely. Should the hive be too full to admit of this under it; take an empty one, and turn it bottom up, which will give abundant room, and catch the bees as they drop off the stocks. Let both hives to be wintered, be treated alike. The one that is to receive the contents of the other, should have the ends of the combs cut off square. With a chisel pry off the side of the other, that you may have a chance to cut out the combs whole, sever the attachments with a broad knife, and set each piece carefully on the square edges of the combs prepared for them. Let each comb occupy the same relative position that it did in the other hive; rolls of paper, or something of the kind, will be needed for a few days between them. Put a stick across the edges of the combs, as a help to support them when the hive is turned over, press it close, and fasten each end to the sides of the hive. Cover the hive to keep out the rain, and let it stand bottom up a week or two, in which time the bees will join the combs together where they touch, when it may be turned over. Let it occupy the stand of the stronger colony of the two. If one of the queens is seen during the operation, she may be kept out, but it is not very important. One of them will be destroyed, and sometimes a few of the bees, but a good swarm will be left, unless both were weak, even after some have returned to the stand they were removed from. All this cutting out and changing combs has been done repeatedly, without anything further than simply smoking the bees a little with tobacco, there is but little danger, yet beginners do not like to risk it. When the light hives are to be set away for another year, as mentioned last month, the bees may be removed by either of these methods, as well as with sulphur. Do not try to keep any very badly diseased stock, even if they are designed to be transferred in the Spring. Bees must have empty cells to creep into in severe weather, otherwise they become chilled and leave the hive in the cold...... The first cool mornings will give a chance to examine the old stocks thoroughly. If any that you wish to keep, lack bees, give them the bees of the light swarms—stupefying both colonies alike. Excessively large colonies are unprofitable, as well as too small. Avoid extremes.

The Agricultural Exhibitions for 1860.

These are now in progress in different parts of the country. So far as we have observed and heard from those Exhibitions held, there is a little less spirit and a diminished attendance at a majority of them, resulting from two or thee causes. The fears of the "cattle disease" have prevented most owners of neat stock from taking their best animals out, and in many cases the managers have excluded cattle wholly. This has taken away one element of interest. Then, farmers have felt, and have been, poor during the past year or two, and have lost somewhat in enterprise. Again, farmers have been too busy during September, getting in their crops and sowing Winter grain, to think they could devote a day or two to attend an agricultural gathering. We merely state these as reasons for the comparatively slim attendance at many of the Exhibitions, and not in excuse for those who should have been present not only for their own improvement, but also for the general encouragement.

Below we give a list of the Exhibitions yet to be held, so far as they have been reported to us. The last named causes will be less operative in October than in the previous month, and good weather favoring, the forthcoming Exhibitions will probably be more successful. We are obliged to those who have furnished reports of the various Exhibitions so far held, but the general character of the *Agriculturist*, and its wide spread circulation, render it inexpedient to devote space to matters of only local interest. The American Pomological Society is a National institution, and its proceedings of general value; and we have therefore given a report of the list of fruits adopted by it, which will be interesting to the whole country.

[The following list includes all the forthcoming Exhibitions reported to the office of the *American Agriculturist* up to Sept. 20th. They are arranged in order of time—the figures [illegible] opening and closing days.]

STATE EXHIBITIONS.

Name.	*Where held.*	*Date.*
Missouri Central	Booneville	Oct. 1—5
New-Hampshire	Manchester	·· 2—4
Iowa	Iowa City	·· 2—5
Michigan	Detroit	·· 2—5
New-York	Elmira	·· 2—5
Oregon	Albany	·· 9—12
Missouri S. E.	Cape Girardeau	·· 11—13
Indiana	Indianapolis	·· 15—20
Mississippi	Holly Springs	·· 16—19
North Carolina	Raleigh	·· 16—19
Georgia	Atlanta	·· 22—26
Virginia Central	Richmond	·· 22—27
Alabama	Montgomery	·· 29—Nov. 2
Maryland	Baltimore	·· 30 ·· 3
Mississippi Central	Jackson	Nov. 6—10
South Carolina	Columbia	·· 13—16
Tennessee East	Knoxville	·· 16—20
Lower Georgia	Savannah	·· 22—
Geo. Cotton Pl's Conv'n.	Macon	Dec. 3—22

COUNTY EXHIBITIONS.

CONNECTICUT.

Litchfield	Litchfield	Oct. 3—4
Middlesex	Middletown	·· 3—5
New London	Norwich	·· 3—5

GEORGIA.

Hancock	Sparta	Oct. 16—20

ILLINOIS.

Lee	Dixon	Oct 1—5
Macon	Decatur	·· 1—5
Lake	Libertyville	·· 2—3
Pike	Pittsfield	·· 2—4
Scott	Winchester	·· 2—4
Shelby	Shelbyville	·· 2—5
Macoupin	Carlinville	·· 2—5
Peoria	Peoria	·· 2—5
Putnam (Buel Institute)	Hennepin	·· 2—5
Adams	Quincy	·· 2—6
Henry	Cambridge	·· 3—5
Logan	Lincoln	·· 3—5
Randolph	Sparta	·· 3—5
Will	Joliet	·· 3—5
Schuyler	Rushville	·· 3—5
DeKalb	Sycamore	·· 4—6
Vermilion	Catlin	·· 9—12
Monroe	Waterloo	·· 16—18

KANSAS.

Breckenridge	Armon Mills	Oct 10—11

INDIANA.

Wells	Blufton	Oct. 2—3
Posey	New Harmony	·· 2—5
Vermillion and Parke	Montezuma	·· 2—5
Warwick	Booneville	·· 2—6
Martin	Dover Hill	·· 3—
Noble	Albion	·· 3—4
Whitley	Columbia City	·· 3—5
Kosciusco	Warsaw	·· 3—5
Williamson	Marion	·· 3—5
Steuben	Angola	·· 4—5
Orange	Livonia	·· 8—13
Gibson	Princeton	·· 9—12
Spencer	Rockport	·· 10—11
Fountain	Attica	·· 10—12
Fulton	Rochester	·· 12—13

IOWA.

Marion	Knoxville	Oct. 2—4
Appanose	Centerville	·· 5—6
Clinton	Camanche	·· 10—14
Monroe	Albia	·· 16—18

KENTUCKY.

Salvisa	Salvisa	Oct. 2—5
Owen	New Liberty	·· 2—6
Springfield Union	Springfield	·· 9—12
Hickman and Ballard	Columbus	·· 9—12

MARYLAND.

Frederick	Frederick	Oct. 16—19

MASSACHUSETTS.

Bristol	Taunton	Oct. 2—3
Worcester	Worcester	·· 2—3
Berkshire	Pittsfield	·· 2—3
Hampshire, Franklin and Hampden	Northampton	·· 4—
Worcester South	Sturbridge	·· 4—
Plymouth	Bridgewater	·· 4—5
Barnstable	Barnstable	·· 9—10
Worcester S. E.	Milford	·· 9—10
Hampshire	Amherst	·· 11—12
Nantucket	Nantucket	·· 11—12
Martha's Vineyard	West Tisbury	·· 16—

MICHIGAN.

Oakland	Pontiac	Oct. 10—12
Washtenaw	Ann Arbor	·· 10—12
Washtenaw and Wayne	Ypsilanti	·· 12—14
Branch	Coldwater	·· 26—28
St. Clair	St. Clair	·· 26—28

MAINE.

Androscoggin	Lewiston	Oct. 2—4
North Aroostook	Presque Isle	·· 3—4
North Kennebec	Waterville	·· 2—4
Norridgewock	Norridgewock	·· 3—4
Piscataquis Central	Dover	·· 3—4
Washington East	Calais	·· 3—4
Franklin	Farmington	·· 3—5
Sagadahoc	Topsham	·· 9—11
Kennebec	Readfield	·· 9—11
Oxford West	Fryeburg	·· 9—11
York	Saco	·· 9—11
Waldo	Belfast	·· 10—12
Oxford Union	East Sumner	·· 16—17
Turner	Turner	·· 16—17

MISSISSIPPI.

Marshall	Holly Springs	Oct. 2—5
De Soto	Hernando	·· 2—6
Noxube	Macon	·· 3—5
Lowndes	Columbus	·· 9—12
Franklin	Meadville	·· 11—13
Monroe	Aberdeen	·· 16—19
Warren	Vicksburg	·· 18—
Oktibbeha	Starkville	·· 22—25
Chickasaw	Okalona	·· 23—26
Grenada	Grenada	Oct. 30 Nov. 2
Pontotoc	Pontotoc	·· 30 ·· 2
Attala	Liberty Chapel	Nov. 1—3
Panola	Panola	·· 6—8
Jefferson	Rodney	·· 6—9
Scott	Hillsboro	·· 7—8
Pike	Summit	·· 7—9
Chocktaw	Bankston	·· 9—10
Claiborne	Port Gibson	·· 13—16

MISSOURI.

Lafayette	Lexington	Oct. 2—6
Clay	Liberty	·· 2—7
Osage	Linn	·· 4—5
Franklin	Meadville	·· 11—13

NEW-HAMPSHIRE.

Merrimack River	Nashua	Oct. 10—11

NEW-JERSEY.

Sussex	Newton	Oct. 2—5

NEW-YORK.

Monroe (Union)	Brockport	Oct. 2—3
Columbia	Chatham 4 Corners	·· 2—4
Wayne (Union)	Palmyra	·· 2—4
Chenango	Coventry	·· 3—4

TOWN FAIRS.

Columbus	Columbus	Oct. 2—4
Oxford	Oxford	·· 2—4
Camden	Camden	·· 3—4
Coventry	Coventry	·· 3—4
Winfield	West Winfield	·· 9—10

PENNSYLVANIA.

Lawrence	Newcastle	Oct. 2—4
Montgomery	Springtown	·· 2—4
Schuylkill	Schuylkill Haven	·· 2—4
Northampton	Nazareth	·· 2—5
Indiana	Indiana	·· 3—5
Crawford	Conneautville	·· 3—5
Franklin	Chambersburg	·· 3—5
Carbon	Lehighton	·· 3—6
Chester	Westchester	·· 5—6
Clinton	Lock Haven	·· 10—12
Delaware	Upper Providence	·· 12—13
Clearfield	Clearfield	·· 16—18

OHIO.

Clark	Springfield	Oct. 1—5
Wood	Perrysburg	·· 2—3
Carroll	Carrollton	·· 2—4
Mahoning	Canfield	·· 2—4
Sandusky	Fremont	·· 2—4
Summit	Akron	·· 2—4
Cuyahoga	Cleveland	·· 2—5
Richland	Mansfield	·· 2—5
Logan	Bellefontaine	·· 2—5
Darke	Greenville	·· 2—5
Lucas	Toledo	·· 3—5
Crawford	Bucyrus	·· 3—5
Harrison	Cadiz	·· 3—5
Hocking	Logan	·· 3—5
Lake	Painesville	·· 3—5
Lawrence	Ironton	·· 3—5
Licking	Newark	·· 3—5
Lorain	Elyria	·· 3—5
Marion	Marion	·· 3—5
Morgan	McConnellsville	·· 3—5
Ottawa	Port Clinton	·· 3—5
Putnam	Ottawa	·· 3—5
Seneca	Tiffin	·· 3—5
Washington	Marietta	·· 3—5
Wayne	Wooster	·· 3—5
Williams	Bryan	·· 3—5
Butler	Hamilton	·· 3—6
Hancock	Findlay	·· 4—6
Stark	Canton	·· 4—6
Trumbull	Warren	·· 4—6
Champaign	Urbana	·· 9—12
Coshocton	Coshocton	·· 10—11
Geauga (free)	Claridon	·· 10—12
Morrow	Mount Gilead	·· 10—12
Wyandot	Upper Sandusky	·· 10—12
Fairfield	Lancaster	·· 10—12
Ashland	Ashland	·· 11—12
Paulding	Junction	·· 25—26

TOWN AND INDEPENDENT FAIRS.

Orwell	Ashtabula	Oct. 1—3
Wellington	(Loraine Co)	·· 10—12

TENNESSEE.

Putnam	Cookville	Oct. 1—4
Maury	Columbia	·· 1—6
Hardin	Savannah	·· 2—6
Wilson	Lebanon	·· 2—6
Fayette	Somerville	·· 3—6
Warren	McMinnsville	·· 9—11
Giles	Pulaski	·· 9—12
Shelby	Memphis	·· 9—13
Hickman	Centerville	·· 9—15
Overton	Livingston	·· 10—13
Gibson	Trenton	·· 10—15
Wayne	Waynesboro	·· 16—20
Montgomery	Clarksville	·· 23—27

WISCONSIN.

Iowa	Dodgeville	Oct. 3—5
Marquette	Westfield	·· 4—5
Portage	Stanton	·· 15—

TEXAS.

Parker	Weatherford	Oct. 16—18

PROVINCIAL FAIRS.

CANADA WEST.

Oxford, (Norwich).	Otterville	Oct. 6—
Wellington	Fergus	·· 9—

CANADA EAST.

Levis	Notre Dame	Oct. 2—
Maskinouge	River du Loupe	·· 2—
Mont Calm	St. Ligouri	·· 3—
Pontiac	Clarendon Center	·· 4—

(*Special report for the American Agriculturist.*)

American Pomological Society.

EIGHTH SESSION.

At each succeeding convention of the fruit growers of the United States, there is to be noticed an augmented interest, a wider representation of delegates from various sections, and evidences of greater success among individual cultivators. The usefulness and influence of the Society are undoubtedly on the increase, and although, as might be naturally expected, an occasional attempt is made, prompted by self interest or undue enthusiasm, to make the Society an advertising medium for unworthy fruits, such efforts uniformly fail, and the society thus far has been guided in its recommendations and condemnations by unswerving honesty of opinion.

It will be perceived from the subjoined lists of fruits that those heretofore recommended "*for general cultivation*" have not been altered. By a vote of the convention this course was adopted for two reasons. 1st.—Every variety composing them had been thoroughly and repeatedly discussed at previous meetings. 2nd.—There were appointed at the present meeting local committees from different sections to report lists of fruits recommended for cultivation *within their* *respective districts*, and to report these lists at the next meeting of the Society in 1862.

It will be remembered that at the last meeting our criticism on the proceedings was "that too much time relatively was devoted to the discussion of pears, leaving too brief a space for the discussion of other important fruits of wider cultivation and interest." We were happy to find that at the recent meeting, a reform in this respect was effected, by taking up the discussion of apples, small fruits, and grapes before that of pears. Another improvement in this meeting was the time devoted to the cultivation and diseases of the Grape and the Pear. This proved to the majority of the audience the most interesting part of the proceedings, but for want of space in this number (as the meeting did not close until most of the paper was stereotyped) we will postpone this part of the discussion.

Below we give what will be deemed most valuable by all interested in fruit culture, viz.; a complete list of the various fruits as they will stand upon the books of the American Pomological Society for the next two years. To secure this, we dispatched to Philadelphia a very careful and experienced reporter for the *American Agriculturist.* As our list two years ago was the only accurate one published, not even excepting the official report of the Society itself, so we hope the following will be found perfectly correct.

For convenience of reference we arrange the list of fruits together. Those marked for GENERAL CULTIVATION are such as, from all accounts, appear to do well throughout the country, so far as tried. As stated above, this list was not changed the present year.

Those fruits in the different lists marked with an asterisk *, are new additions, made to these several lists at the recent meeting, by *general vote.*

APPLES.

FOR GENERAL CULTIVATION.

Amer. Summer Pearmain,
Autumn Bough,
Baldwin,
Benoni,
Broadwell Apple,
Bullock's Pippin,
Carolina June,
Coggswell,
Danver's Winter Sweet,
Early Harvest,
Early Strawberry,
Fall Pippin,
Fameuse,
Gravenstein,
Hawley,
High Top Sweeting,
Hubbardston Nonesuch,
Jonathan,
Lady Apple,
Ladies Sweet,
Large Yellow Bough,
Melon,
Minister,
Monmouth Pippin,
Porter,
Primate,
Rambo,
Red Astrachan,
Rhode Island Greening,
Roxbury Russet,
Smith's Cider,
Summer Rose,
Swaar,
Vandervere,
Wagener,
William's Favorite (except for light soils),
Wine Apple, or Hays,
Winesap.

APPLES PROMISING WELL.

Buckingham,
Bonum*
Canon Pearmain,*
Early Joe,*
Fall Wine,*
Fornwalder,
Genesee Chief,
Jeffries,
King of Tompkins County,
Keswick Codlin,*
Limber Twig,*
Maiden's Blush,*
Mother,
Pomme Royal,*
Pryor's Red,*
Rawles Jeannette,*
Smoke House,
Stansill,*
Summer Queen,*
Summer Sweet Paradise,*
White Pippin,*
White Winter Permain,
Willow Twig,*
Winter Sweet Paradise,
Winthrop Greening, or Lincoln Pippin,
Willis Sweeting.

FOR PARTICULAR LOCALITIES.

Canada Red,
Æsopus Spitzenberg,
Newtown Pippin,
Northern Spy,
Yellow Bellflower,
Ribstone Pippin.

FOR GARDENS.......Garden Royal.

PEACHES.

FOR GENERAL CULTIVATION.

Bergen's Yellow,
Crawford's Early,
Crawford's Late,
Coolidge's Favorite,
Early York, large,
Early York, serrated,
George IV.,
Grosse Mignonne,
Hill's Chili,
Large White Cling,
Madeleioe de Courson,
Morris' White,
Old Mixon Free,
Old Mixon Cling,
Teton de Venus.

PROMISING WELL.

Chinese Cling,
Columbia,
Carpenter's White Freestone.
Gorgos,
Susquehanna,

Heath Cling, for Particular Localities.

PEARS.

FOR GENERAL CULTIVATION.

ON PEAR STOCK.

Ananas d'Eté,
Andrews,
Bartlett, (Williams' Bon Chrétian),
Belle Lucrative, or Fondante d'Automne,
Beurré d'Anjou,
Beurré d'Aremberg,
Beurré Bosc,
Beurré Clairgeau,
Beurré Diel,
Beurré Giffard,
Beurré Hardy, (Sterckman's),
Beurré St. Nicholas,
Beurré Superfin,
Bloodgood,
Brandywine,
Buffum,
Cabot,
Dearborn's Seedling,
Doyenné Boussock,
Doyenné d'Alençon,
Doyenné d'Ete,
Flemish Beauty,
Fulton,
Golden Beurré of Bilboa,
Howell,
Kingsessing,
Lawrence,
Louise Bonne de Jersey,
Madeleine,
Manning's Elizabeth,
Onondaga,
Osband s Summer,
Paradise d'Automne,
Rostiezer,
Seckel,
Sheldon,
Tyson,
Urbaniste,
Uvedale's St. Germain, (for baking),
Virgalieu, (or White Doyenné),
Vicar of Winkfield,
Winter Nelis,
St. Michael Archange.

ON QUINCE STOCK.

Belle Epine Dumas,
Belle Lucrative,
Beurré d'Alençon,
Beurré d'Amalis,
Beurré d'Anjou,
Beurré Diel,
Beurré Hardy, (Sterckmans),
Beurré Langelier,
Beurré Superfin,
Buffum,
Catillac,
Duchesse d'Angouleme,
Easter Beurré,
Figue d'Alençon,
Glout Morceau,
Louise Bonne de Jersey,
Napoleon,
Nouveau Poiteau,
Rostiezer,
Soldat Laboureur,
St. Michael Archange,
Urbaniste,
Uvedale's St. Germain, or Belle Angervine, (for baking),
Vicar of Winkfield,
White Doyenné, (Virgalieu of N. Y.)

PEARS PROMISING WELL.

Adams,
Alpha,
Bergen
Beurré d'Allert,
Beurré Gris d'Hiver Nouveau,
Beurre Kennes,
Beurré Langlier,
Beurré Montgeron,* or Fred'k of Wurtemberg,
Beurré Nantais,
Chancellor,
Collins,
Comte de Flanders,
Comptesse d'Alost,
Conseillier de la Cour,
Delices d'Hardenpont de Belgique,
Dix,
Duchesse d'Orleans,
Duchesse de Berry d'Eté,
Emile d'Heyst,
Epine Dumas,
Fondante de Charneuse,
Fondante de Comice,
Fondante de Malines,
Hinkle,
Hosen Schenk,
Hull,
Jalouise de Fontenay Vendée,
Kirtland,
Limon,
Lodge, (of Penn.,)
Merriam,
Niles,
Nouveau Poiteau,
Ott,
Omer Pacha,*
Philadelphia,
Poire des Nonnes,*
Pinneo, (Boston,)
Pius IX.,
Pratt,
Rouselette d'Esperen,
Steven's Genesee,
Sterling,
Striped Madeleine,
Theodore Van Mons,
Uwchlad,*
Van Assene, (Assche,)
Walker,
Zepherine Gregoire.

PLUMS.

FOR GENERAL CULTIVATION.

Bleecker's Gage,
Coe's Golden Drop,
Green Gage,
Jefferson,
Lawrence's Favorite,
Lombard,
McLaughlin,
Munroe.
Purple Favorite,
Prince's Yellow Gage,
Purple Gage,
Reine Claude de Bavay,
Smith's Orleans,
Washington.

PLUMS PROMISING WELL.

Bradshaw,
Duane's Purple,
Fellenberg,
General Hand,
German Prune,
Ives' Washington Seedling,
Pond's Seedling,
River's Favorite,
St. Martin's Quetche,
White Damson.

CHERRIES.

FOR GENERAL CULTIVATION.

Belle d'Orleans,
Belle Magnifique,
Black Eagle,
Black Tartarian,
Coe's Transparent,
Downer's Late,
Early Purple Guigne,
EarlyRichmord (for cooking)
Elton,
Governor Wood,
Graffion, or Bigarreau,
Knight's Early Black,
May Duke,
Reine Hortense.

CHERRIES PROMISING WELL.

American Amber,
Bigarreau Monstreuse de Mezel,
Black Hawk,
Great Bigarreau of Downing,
Hovey,
Rockport Bigarreau,
Kirtland's Mary,
Ohio Beauty,
Walsh's Seedling,

Napoleon Bigarreau, for Special Cultivation.

RASPBERRIES.

FOR GENERAL CULTIVATIOR.

Fastolff,
Franconia,
French,
Knevet's Giant,
Brinckle's Orange,
Red Antwerp,
Yellow Antwerp.

RASPBERRIES PROMISING WELL.

American Red,
Belle de Fontenay,*
Cope,
Catawissa,
Hornet,*
Thunderer,
Walker.

BLACKBERRIES.

FOR GENERAL CULTIVATION.

New-Rochelle, (Lawton,)
Dorchester.

STRAWBERRIES.

FOR GENERAL CULTIVATION.

Boston Pine, (in hills),
Hooker's Seedling,
Hovey's Seedling,
Large Early Scarlet.
Longworth's Prolific,
Wilson's Albany.

STRAWBERRIES PROMISING WELL.

Jenny Lind,*
Genesee,
Le Baron,
McAvoy's Superior,
Scarlet Magnate,
Walker's Seedling,
Triomphe de Gand.

CURRANTS.

FOR GENERAL CULTIVATION.

Black Naples,
May's Victoria,
Red Dutch,
White Dutch,
White Grape.

CURRANTS PROMISING WELL.

Cherry,
Fertile de Palluau,
Imperial Yellow,*
Versailles,
White Gondoin.*

GRAPES.

FOR GENERAL CULTIVATION.

OUT-DOOR CULTURE.	UNDER GLASS.
Catawba, Concord, Delaware, Diana, Isabella.	Black Hamburg, Black Frontignan, Black Prince, Chasselas de Fontainbleau, Grizzly Frontignan. White Frontignan, White Muscat of Alexandria

GRAPES PROMISING WELL (Open Culture.)

Hartford Prolific,
Logan,
Rebecca,
Union Village.

GOOSEBERRIES FOR GENERAL CULTIVATION.—Crown Bob; Downing's Seedling*; Early Sulphur, Green Gage; Green Walnut; Houghton's Seedling Iron Monger; Laurel; Mountain Seedling; Red Champagne; Warrington; Woodward's White Smith.

APRICOTS FOR GENERAL CULTIVATION.—Breda; Large Early; Moorpark.

NECTARINES FOR GENERAL CULTIVATION.—Downton; Early Violet; Elruge.

BRIEF GENERAL NOTES.

APPLES.—There were no new varieties adopted in the lists, although Dr. Warder of Ohio brought forward a long list of fruits well known in the West and Southwest, which have not yet appeared on the Society's catalogue.

SMALL FRUITS.—Among these the currant seems to be attracting most attention from cultivators. One gentleman in Massachusetts has now under cultivation thirty six varieties. The *cherry currant*, now upon the list of "Promising well," was the subject of an interesting debate, and a motion to strike it of the list was nearly successful.

STRAWBERRIES.—The two new strawberries most praised, were the foreign varieties: *Vicomtesse de Hericart* and *Triomphe de Gand.* American cultivators have of late years despaired of procuring any strawberry of value in this country from foreign varieties. It was however remarked by Mr. Hovey, that a distinction should be made between the English and Continental varieties. In Belgium, cultivators have been propagating for some years from our best American sorts, and a higher result may be expected from them than any we have yet reached.

RASPBERRIES.—The Allen rasberry was, after much discussion, and a strong minority vote, placed on the list of rejected fruits. Many of our native varieties, called thimble berries, were brought to notice; the *purple cane*, or American *red cane* was pronounced by Mr. Downing, "emphatically the farmer's berry."

GRAPES.—This fruit seems to be attracting more attention, just now, than any other. New seedlings come forward in great number, and high hopes are entertained. We are glad to notice, however, that new and untried kinds are announced cautiously, and every opportunity afforded for testing their value before they are offered to the public.

Mr Rogers of Massachusetts has been employing his leisure hours in hybridizing or crossing some of the fine European varieties with our American grapes, and has produced 40 varieties which he is experimenting still further with, and many of them are of the highest promise.

Pears.—Heretofore this fruit has usurped a disproportionably large share of the attention of the Society. A healthful, moderate tone seemed on this occasion to pervade the discussions, yet there appeared no diminution of enthusiasm, and the more than ordinarily large display on the tables of the exhibition room spoke well for the progress made by our pear cultivators.

The Crops—Prospective Prices.

A single subscriber in Indiana, has written to take exceptions to our remarks last month, in regard to the crops of the present year. The fact that only one has so written, confirms the opinions we expressed, for we expected to hear from many other localities where the crops are not up to the average. A reliable friend, an intelligent, observing eastern farmer, who makes now and then an extended visit among his sons and relatives, residing in Michigan, Illinois, Wisconsin, Minnesota and Iowa, called on us to-day, and he says "the wheat crop and the growing corn all over the Northwest country, where I have traveled since July 15th, exceed anything that I have ever seen in my life. I don't see what is to be done with all the breadstuffs, this year." Such in effect are most of the reliable reports we get direct from unprejudiced visitors to the Northwest. But, as hinted last month, we freely admit that there are, scattered all over the country, limited localities where drouth, frost, and in some cases even too much rain, have produced short crops. In Missouri, crops are hardly an average; in Kansas they have generally failed, disastrously so; in Kentucky and Tennessee the yield of wheat and corn will be below an average, and in most states south of latitute 38° the cereal crops are bad enough. But in the great grain-producing States of the North and Northwest, there is no mistake about the yield being far above the average, taken as a whole.

In regard to *prices*, as a general rule, taking one year with another, those producers who have sold soon after harvest, have *averaged* better prices than those who have held on six to twelve months. This has been our own observation for twenty years past, and every man who has carefully noted the markets, will confirm this. Sometimes a capital hit has been made by holding on, but more frequently the reverse has been the case, if we take into account, shrinkage and loss in storing, interest on money etc.

This year we have, so far, offered no advice as to the best time to sell, for we think the chances about even, every thing considered. The redundant crop would indicate a decline in prices when it all comes to market. On the other hand, the demand to supply the deficiency in the Southern and South Middle states, together with the better foreign demand, will probably absorb most of the surplus breadstuffs, and keep prices up to fair rates, and perhaps carry them to a higher point than now. Much depends upon the result of the harvest in Great Britain and on the Continent of Europe. Until lately, the harvest prospects abroad were bad; but each successive recent arrival has brought news of better weather and improving prospects. We have probably heard the worst, for fears before harvest are magnified, not only by farmers themselves, but by speculators who have stocks of grain on hand, which they wish to dispose of at high rates. From a careful survey of all the information at hand, we believe the foreign yield of grain will not be as bad as it has been represented, but the product will be below the average, and there will be a moderate but not excessive demand for our breadstuffs. The effect will be to prevent very low prices here, but not to carry them very high. We repeat, then, that the chances for higher or lower prices are very near equal at this time, and for ourselves, we should be governed very much by our circumstances—immediate necessity for money, convenience of storage and taking to market, etc.—in deciding whether to sell now, or wait future developments.

P. S. Sept. 19th. The news from Europe to-day indicates better harvest prospects, so much so, that there is a considerable decline in wheat and flour at London and Liverpool. The New York market is consequently falling somewhat, but we do not look for any serious effect. All the reports of bad crops coming across the Atlantic for two months past, have not been without foundation. The opinion expressed above in regard to prospective prices, is slightly modified by today's foreign advices, but only slightly so.

The Barometer on Washing-Day.

Every day's experience and observation strengthen our belief in the usefulness of a barometer. To-day an intelligent farmer from Connecticut called in to thank us for the explanatory article upon barometers in the August *Agriculturist*. Said he: "I have had a $20 mercurial barometer in my house many years, but not fully understanding it, I made no use of it. Your explanations made me understand it; I now daily watch its movements, and am governed much by it in my plans. Last Monday it looked so stormy that wife decided to defer washing. As my barometer indicated no change, I advised her to go on with the work. Tuesday morning it looked fair, but my barometer had fallen 3-10ths of an inch and I predicted rain. Wife laughed at my instrument, and congratulated herself on getting the victory over my scientific weather-teller. Well, it rained hard more than half of the day...."—The Springfield Republican gives the following:

Several instances of the usefulness of the barometer have been made known to us. A gentleman who had fixed a day for commencing haying, found that his barometer on that morning indicated rain, and he postponed his haying. It rained during the day and for two succeeding days, but he saved his hay, while his neighbors, who had no means of foretelling the weather, cut their grass, and lost by the operation. A farmer at Chatham, N. Y., had a large quantity of hay and grass cut one day, and on going to dinner, noticed that the barometer indicated rain. His men went immediately to work and saved most of the hay and grain, while his neighbors, who were not forewarned in time, experienced a loss. A physician at Reading had fixed a day for his haying; the morning was fine, but the barometer said rain, and he deferred mowing, and advised his neighbors to do the same. But they laughed at him, and went to work, and the rain came at noon. Many such facts might be given to show the value of a barometer to the farmer. It will soon be considered as indispensable as a clock in a farmer's kitchen. Those who omitted to study the article on barometers, in our August paper, will do well to refer to it.

What shall be done with Cotton Seed?

A correspondent from Mississippi puts to us the following questions: "How much oil can be expressed from a ton of cotton seed? How much from the hulled seed by weight? What will be the weight of cake after the oil is pressed out? What machinery would be required to clean the seed ready for the press? Cost in New-York or New-Orleans? What is the wholesale price in New-York, of the oil, of the cake, of the meal?"

These questions open a subject of very great importance to the cotton planter. It is whether the seed of his main staple, now an article that rots at the gin-house, or that is only used for manure, can be made profitable to him. The plan of our correspondent manifestly is, to purchase machinery, to express the oil upon the plantation, and to use the cake for feeding, if it can be made to pay. The question is not whether a mechanic or capitalist in Vicksburg, or Natchez, who can buy cotton seed at ten cents a bushel, can make the manufacture of oil and cake pay, but whether the planter can afford to go into this business on his own account? What is the cotton seed really worth to him as he is situated, for feeding purposes? We wish to look at this aspect of the question before proceeding to the questions touching the machinery, etc.

Throughout the cotton region, there is a great lack of feeding stuffs. Cotton is regarded as the main staple, and every thing else is neglected for this. Though it is not regarded as good husbandry by the most intelligent planters, it not unfrequently happens, that the planter does not raise his own corn, or pork. In a season of drought like this, many a planter will spend thousands of dollars for corn, hay, pork, beef, etc., that might all be made upon his own plantation. Whatever may be the fact in the case, it is generally believed that our cultivated grasses will not flourish in the cotton belt, and it is only in rare cases that the seed is sown. The cows, where they are kept, get a meager subsistence from the woods and cane brakes, and give milk but a part of the year. The main reliance for fodder for mules, horses, and horned cattle, is the stalks and grain of Indian corn. This plant, which comes from the South, and might be made immensely productive and cheap, is very seldom cultivated with animal manures, and the crop is much smaller than in a less congenial climate, where it has better husbandry. Corn is often, if not always, as high in the cotton region as in this market. Immense quantities of corn go down the Mississippi and its tributaries, to find a market upon the cotton plantations. A dollar is not infrequently paid for a bushel of corn, and seventy-five cents is a common price. Probably this last figure would not be an over estimate for the average price of corn in the cotton belt for a term of years.

In such a region, a new supply of fodder is a desideratum, and one of the richest boons that could be bestowed upon the planter. We are quite confident that he has this desideratum, and this boon, in the seed of his great staple. It is not until quite recently that the cotton seed has received any attention as an article of food, or that any use has been made of it except as manure. Even now it is wasted quite as often as saved, and though its value, as a manure, is demonstrated, it is thrown into the nearest stream, or suffered to rot in the neighborhood of the gin. Its value is not yet generally understood, and there is no large demand, either for the oil or for the cake. The whole use of the seed is still a matter of experiment, and it must be some years before it can work its way into popular favor. It is only because the seed could be had for a song, that efforts have been made to extract oil from it, and to use the cake for feeding purposes. A very ingenious machine has been invented for hulling the seed, and we have cake and oil made from the hulled and unhulled seed. The cotton seed oil is used for various economical purposes, and the meal gives pretty general satisfaction so far as it is used. The crude oil is quoted in the prices current at about fifty cents a gallon, and the refined at about eighty. The meal has sold in Northern markets at about one dollar and fifty cents the hundred weight the past season. This we suppose to be the meal of the cake ground after the oil is expressed. Of course the meal made from the seed before pressing, would be much more valuable for feeding purposes. Judging from the market prices of the oil and of the meal, cotton seed at the planter's gin is not worth less than a dollar a bushel as an article of fodder. How far the corn mills would answer to grind cotton seed we are not able to say, but we should suppose they would make the meal sufficiently fine for feeding. Every large plantation has its own mill, generally at the gin-house, and the same machinery that makes corn meal would serve to make cotton seed meal. We should like to see some experiments made to establish this point. Our present belief is, that the cotton seed is worth a great deal more to the planter to feed to his cattle, than it would be to sell to the manufacturer, or to work up himself into oil and cake for market.

The system of husbandry pursued upon the cotton plantation, is rapidly destroying the soil, and deserves the reprobation of every intelligent cultivator. Nothing but cotton is sold from the plantation, and no pains are taken to make manures, and to restore the wasting fertility of the soil. The use of cotton seed is some compensation to the land for the constant drain upon it. It would be worth still more to the land if it could be passed through the bodies of animals, be mixed with muck or soil, and the compost be applied to the cultivated fields. To turn the seed into oil and cake for market, would be only to hasten the destruction of the plantation, a process that is going on too fast already.

If the plan of our correspondent is to make oil, and feed the cake upon his plantation, that would indeed be a partial remedy, if the manure were saved. But we do not believe that the oil can be economically expressed where the meal of the ground seed (not the cake) is worth a dollar, or even seventy-five cents a bushel. What the cotton planter most needs, is not a new vegetable product to send to market, but more feeding stuff for his animals, a good system of saving manure, and applying it to his cultivated fields, to make amends for the drain of his great staple upon the soil. As he now manages, in any of the upland districts where the overflow of streams does not manure his lands for him, he is all the while dissipating his capital by selling the fertility of his soil, and doing nothing to restore it. He may increase his force of laborers, and his bank-stock, but at the end of a term of years, he generally finds that he has lost his plantation. The land that once produced one and two bales of cotton to the acre, will not produce a quarter of that yield; will not indeed pay for cultivation, and is turned out to old field. If he can purchase no new land in his vicinity, he must sell out, and go to Texas, or some other new country.

It is this wasteful husbandry that has desolated the older cotton States, and that is now pouring such a tide of emigration into Texas, where the same process will be repeated, unless a wiser husbandry prevail. Nothing is worthy of the name of husbandry, that does not enrich the land as well as its owner. It is worse than Vandalism to dissipate the inheritance of our children. Husbandry will so use the soil that they shall have a richer possession than we have inherited.

*

Tim Bunker on Feeding with Oil Meal.

"It's no use to try it," said Jotham Sparrowgrass, as he poked his cane into the tub where I was preparing a mess for my fattening cattle.

"No use to try what, said I?"

"Why, to fat cattle with iled meal. You see the thing has been tried, time and agin, over on the Island, and failed. Never could make the cattle eat the stinking stuff. Job Woodhull, and Zophar Mills, both tried it one Summer. You see they had heern a great deal about feeding animals with ile meal, and they took it into their heads to make a lot out of fish ile and Indian meal. They had a plenty of ile from their fish works, and they put in about five gallons to a barrel of meal, and mixed it up well. They tried to get oxen to eat it, but it was no go. They kept trying every thing with it for a week or more, and by that time it was about the stinkenest mess that was ever got up on the Island, where they are famous for smells, especially in the fish season. I guess they have'nt heerd the the last of that ile meal yet."

"The oxen were sensible brutes for not touching such stuff," said I. "But you see, Uncle Jotham, this is not that kind of oil meal.

"Du tell!"

"You know there are certain kinds of plants that produce oil-bearing seeds, and when they are pressed for the sake of the oil, a cake remains, which is good for manure or for provender. They press rape seed and the castor oil bean, and the refuse cake makes a very good manure. They press flax seed to get linseed oil for painting, and cotton seed to get oil for burning, for making soap, and other purposes. The cake that remains is ground up into meal; and is fed to cattle."

"Well, I never paid much attention to it. But I allers thot oil meal was such as they made on the Island."

This talk with Uncle Jotham occurred more than a year ago, when I first begun to use the meal made from linseed and cotton seed cake. I had not much faith in it myself, when I begun to use it, though I ought to have had. For linseed cake has been used for fattening cattle, and various feeding purposes, for several generations. It is astonishing to see how little faith people have in any thing they have not seen and tried.

In England, if a farmer has got to purchase feeding stuff, he is certain to invest in oil cake. In this country, it is pretty certain to be corn, or oats. Almost all the oil cake made in this country is sent to a foreign market, because very few of our farmers have tried it. Once in a while we find an imported farmer like John Johnston of Geneva, or the dairy farmers, using oil cake for feeding. But not one farmer in a hundred has ever seen it or tried it. As a rule, they have no faith in buying any thing to keep up their cattle in high condition. They sell grain, and feed out hay and grass. These, no doubt, are the staple articles of fodder, but all cattle will do better to have some addition to hay and grass. I have always fed every thing I could raise on my farm, oats, buckwheat, rye, and roots, and have no doubt it pays. If any body can use grain to a profit, the farmer can. The man who buys his grain expects to make a profit on it, and in most cases, does so. Why should not the farmer feed his grain and make the profit himself? If there is a profit in feeding twenty bushels of corn to a bullock, of say, three dollars, the farmer, especially if he live near a good market, can make the profit a little better than any body else. He wants the manure for his land, and the manure is on the soil where it will be plowed in. There is no expense for carting it three or four miles from the village, or of shipping it fifty miles, or more, from the city.

I always liked to feed grain, corn meal, oats, etc., but I think now the oil meal pays better than even the grains. The linseed meal comes pretty high, and that is one great objection to its use. But the cotton seed meal comes even cheaper than corn meal, and I think does better than linseed, pound for pound.

I had not used it a month, before Jake Frink came along one morning and hailed me.

"What ye ben duin to yer cattle lately, Mr. Bunker? I see the hair looks mighty sleek and shiny as ef it had been combed with a fine tooth comb, and had some intment on tu it."

"You are right neighbor, but the ointment was applied on the inside. I have been feeding with oil meal."

"What upon airth is ile meal, never heern of sich stuff."

"Well there is a fellow up here in Shadtown has started the business of pressing cotton seed oil, and sells the meal from the ground cake, to the farmers."

Jake Frink was about right in describing the glossy coat of my yoke of oxen, though, perhaps, I did not do full credit to John's curry comb, and wisp of straw. They are Devons, and John takes a good deal of pride in polishing them down, especially when he drives a load of wood to market in Shadtown. Whether any body looks out of the window, at the young farmer's team, or at his wood, I am not able to say. He is uncommon fond of going to see Sally at the parsonage, I have noticed lately, and the span of Black Hawks are quite as shiny as the oxen. Probably he don't want to disagrace his sister, when he is in town.

I have been trying this feed for a year or more, and think I get more for my money, than in any kind of feed that I buy. It comes considerable cheaper than corn meal, and goes further in making milk, butter, cheese, beef, mutton, pork, etc. It is excellent for working cattle, making them shed their coats early in the Spring, and keeping them in good flesh. It increases the product of milk from twenty to thirty per cent, depending, somewhat, upon the condition of the cow. I have found about two quarts a day enough for a single animal. If fed too liberally, it gives the milk an unpleasant flavor. It keeps the cattle in good thriving condition. In making beef, a larger quantity should be used; there is no bad taste imparted to the meat.

Almost all cattle are a little shy in eating it at first, and, in this respect, they are pretty much like their owners in buying it. But if a small quantity is mixed with some palatable food, they will eat it, and soon become very fond of it. One great advantage in using this, and the linseed cake meal, is the excellent quality of the manure It seems to do execution on the land like hog manure. I have never had such a yard of manure as I carted out this last Spring, and I think it must be owing, in part, to the two tuns of cotton seed meal used by my cattle last Winter. It would have made a great difference in the looks of my farm, if I had begun to use this article, ten years ago. But we must all live to learn.

Yours to command,

Hookertown, Ct., Sep. 1860.] TIMOTHY BUNKER, ESQ.

Wheat and Chess—Once More.

$500 REWARD.

To the Editor of the American Agriculturist:

I've been aching for more than thirty years, to give editors of agricultural journals 'fits,' for you are the most arrogant chaps, we farmers have anything to do with. Just look how you treat us on the old chess question. "You are tired of it;" then to settle it, you launch off into learned names of some authorities, no farmer knows of, and treat them to a dish of *Bromus Secalina*, and insinuations of the silly notions of "*common people*," intimating that farmers don't know enough to last them up a short hill. You call for specimens, when they affirm their experience of having seen the fact of Chess and Wheat growing together, as if we were either liars, or were incapable of judging of what we see. Now I've lived some sixty three years, and once in that time I have seen a head of wheat and a sprangle (as we call it) of chess growing on one stalk, in the then Territory of Michigan, and showed it to many of my neighbors, men and women, well able to judge of what they saw, *common* as they might be. I also in that same Territory, saw *chess* growing on more than a dozen stalks of *flax*, and having some seven or eight hands hoeing corn on my land at the time, I called them to witness the fact. Some of those men are now living, good men and true, and reminded me of it two years ago when I was there on a visit. Again, fifteen years ago, when I first settled here, a brother-in-law of mine broke up ten acres of new land, part prairie, part barrens; on one side, about six rods from the edge of said lot, ran an old road, which didn't get broken much with the rest, being hard. He sowed the plumpest, cleanest wheat I ever saw, on said lot. The result was an abundant crop of beautiful wheat, excepting the said strip of road, of some eight feet wide and forty rods long—which was chess, stout enough to bear up a cradle. Now sir, you may call chess by any name you choose, but it wont explain how that strip of chess came where clean wheat was sown the previous season. There was no chess in the wheat on either side of the said road. This fact was witnessed by some of the best farmers in the town, and many of them are here now, and often speak of it. I dont say wheat turns to, or is transmuted to chess, for I think I can explain it upon the principles of natural science; but that wasn't the object of the present article. It was to get up a little modesty in editors of agricultural papers, and prevent their squirtations of so much learned dyestuff into the eyes of old eye witnesses of what said editors deem a delusion. What in the name of common sense, can *Bromus Secalina* have to do with the fact of the appearance of chess where wheat was sown? Then to call for specimens as though *you*, because you are an editor had any better senses than observing farmers.

Now sir, I believe in book farming and read all I can get hold of on the subject, have taken another agricultural paper and yours in '57, and my son takes yours now—and I another paper; but I don't believe all you together can see a stalk of wheat and chess growing in company on the same stem more sure than I or any other old or young farmer, though we may be common folks.

Kane Co., Ill. JOHN R. ROBINSON.

REMARKS.—Mr. Robinson must feel better now, after having "spoken his mind." His bile has rather overflowed and run down into his ink a little, but we are too benevolent to withhold a letter, the insertion of which will alleviate an "aching of more than thirty years' standing," and we shall try not to personally appropriate any of those "fits." We don't know what agricultural editors he is driving at, as, with few exceptions, our acquaintances among the fraternity are very modest men; and it could not well be otherwise. It is the universal rule, that while 'a little knowledge is a dangerous thing,' because it puffs a man up, and makes him "arrogant," a good deal of knowledge makes a man humble. Agricultural editors devote their chief attention to gathering knowledge from a wide field of observation, and they ought to be, and we believe generally are, far from "arrogant." Is not Mr. R. a little arrogant in assuming to speak for *all* the "common people!" We have a strong admiration for that class—those possessed of common sense, and have flattered ourselves until this day that we were born and brought up among them. In the article overhauled by Mr. R., we did quote from a foreign writer who speaks of the "common (superstitious) people" of Europe. When we spoke of the cultivators of this country, we called them *farmers*—a name we deem the most honorable. But enough on this point. In our former article, page 234, we spoke of the impossibility of one species of plants changing or transmuting into another. Chess, called by botanists, *bromus secalina*, is a distinct species from wheat, called by botanists, *triticum*, and nothing but a miracle—a direct act of Providence—can cause one of these species to change into, or produce the other species.

So confident of this are we, and so desirous, withal, to set at rest a question of this kind, that we make the following offer:

$500 REWARD.—The Publisher of the *American Agriculturist* will pay a reward of $500 to any person who will prove by clear unmistakable experiment, to the satisfaction of intelligent and disinterested parties, that chess can be produced from wheat. No other conditions are made, than simply that the experiments shall be so conducted that there can be no mistake about the transmutation.

Let us add that we do not call in question the veracity of those who assert that they have seen chess grown from wheat kernels. We have no doubt they believe what they assert; but, in the full conviction that there is some mistake about it, and to encourage experiments, we make the above offer in good faith, and will most cheerfully pay the reward if a single case of transmutation can be proved. Let those interested make the trial, and if they succeed once, it will of course be easy to repeat the experiment under circumstances that will admit of no doubt.

* * *

GRAIN CROPS OF THREE STATES.—Some idea may be formed of the rapid growth of the West from the statistics of grain exported from three States from Aug. 20th 1859 to July 15th, 1860. The figures are taken from accounts of the actual shipments at the Upper Mississippi ports.

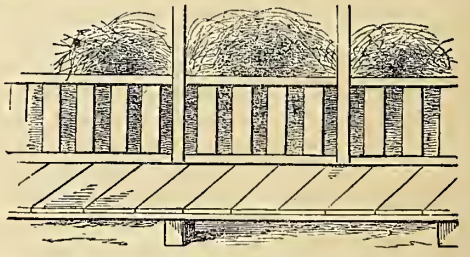
	Wheat.	*Oats*	*O'r grain.*	*Total.*
From Minnesota.	1,050,685	538.500	57,100	1,646,285
" Iowa......	1,254,840	297,120	25,970	1,577,930
" Wisconsin.	486,720	354,390	27,113	868,223
Total....	2,792,245	1,190,010	110,183	4,092,438

When it is remembered that, but a few years since, this whole territory was almost unbroken prairie, the above figures are almost beyond belief. The exports for the next and succeeding years will, without doubt, far exceed the above amounts.

For the American Agriculturist.

Plan of Sheep House.

I have a shed 20x30 all inclosed, except 10 feet in front which is left open. It is inclosed with boards running up and down, and cracks ½ an inch wide are left between each two boards, to give free circulation of air. All around the inside of the building, (except at the doors,) 44 inches inside of the principal sill, is another sill framed in, so as to leave its top 6 inches lower than the top of the outer one. On this space of 44 inches I lay a plank floor. Two feet from the outside of the floor I have 2x4 scantling put up about 12 feet apart, toe-nailed to the floor, and spiked to joists above. A board or plank 7 inches wide is spiked on to these uprights, and 2½ feet high, a 2x4 strip is also spiked to the scantlings. Upright boards 7 inches wide are nailed to the plank, and to this strip, leaving a space 7 inches wide between each two boards. The center of the shed, inside of the inner sills on the floor is left 1 foot lower than the top of the sill. The figure shows a section of the side of the building with the platform and rack.



Put the hay in behind the scantling and boards, and the sheep jump up on to the floor, and put their heads through the 7 inch spaces between the boards and eat. When they attempt to step back and pull the hay out, they step off the floor and at once abandon it. In this way they are prevented from pulling the hay out under their feet, and no matter how many sheep are fed, they will not waste a pound of hay during the Winter. I put my hay in the loft of this building, leaving holes in each corner for putting it down, and in wintering 50 sheep every Winter, the saving and convenience pays for the building. I stack wheat straw in the yard, keep them by themselves with free access to water, and never have a poor sheep, though feeding hay but once a day.

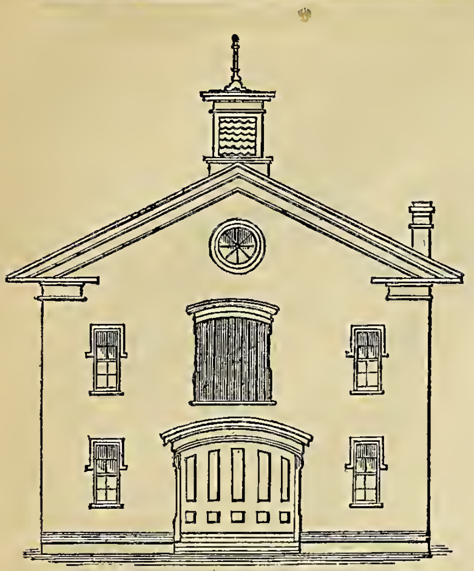
Wayne Co, N. Y. L. S. KETCHUM.

For the American Agriculturist.

How to keep Potatoes.

More potatoes are spoiled through sweating than freezing. I never lose any, but save them thus: I raise the place six inches where I want the pit or hole, beating it hard with the spade. I throw the potatoes on, shaping like a pyramid, and cover thickly with straight clean straw. I then commence at the bottom, throwing on the earth and trampling it hard with my feet; one foot thick is plenty. When within a foot of the top, I make a hole in the straw with my hand, and put in a small funnel, one foot long and three inches square. Close the straw tight around the funnel, and cover closely with earth, clapping the whole solid with the spade. Let the funnel remain two weeks, (cover it with a small board in case of rain,) then take it out, close the hole with straw, cover with earth, place a green sod on the top, set four small forked stakes in the ground around the heap, cover with boards to keep off rain, and I will insure your potatoes.

Allen Co., Ind. W. W.



FRONT ELEVATION, FACING THE STREET.

Barn Plans.

BY N. B. ABBOTT, WATERTOWN, CONN.

We present another selection from the fifty three plans for barns, sent in competition for the prize offered in the February *Agriculturist* (p. 60) This fulfils all the conditions required, viz.: "to front the north side of an East and West street, and be aceessible in front and rear; to have a floor for three 4-wheeled vehicles and a sleigh; to contain stalls for four horses and two cows; also a tool-room and work-shop combined, with ample space for farm and garden implements; rooms for garden truck, hay, straw, feed bins, etc., and to cost $900 to $1200." The drawings of Mr. Abbott's plan were very neatly executed, and a study of the engravings and description will afford several suggestions of value to every one designing to construct a barn of any form, or for whatever purpose—....*The engravings are all reduced to a scale of one inch to sixteen feet*—The size of the building is 32x40 feet. Hight of posts 23 feet. Hight of basement, 7 feet in the clear; hight of first story, 8 feet in the clear.—

The Elevation Plan shows the general style of finish. (The rear may be finished in the same style, or more plainly according to its exposure to view, etc.)

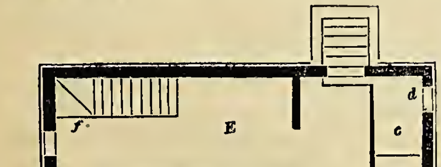


Fig. 2—UNDERGROUND, OR CELLAR PLAN.

Fig. 2. Basement Plan.—*A* is the manure cellar, with piers to support the floor.—*B* is a *root cellar*, with bins, *c*, *c*, *c*, along the side. Each bin has a window or slide, *d*, in the wall, through which to unload the roots directly into the several bins. This is a convenient labor-saving arrangement for any barn where the space outside of the wall is clear for driving along side.—*E* is a passage way to the bottom of the stairs at *f*. At *g*, is an opening outward, with an inclined plane long enough and at such an angle as to admit of backing a team down to draw out the manure. The outside walls are of stone, 18 inches thick; the partition walls and piers of brick, 12 inches in thickness. (The bottom of the cellar will need to be grouted, and the walls laid with hydraulic cement mortar, to keep the manure from settling under them and out into the vegetable cellar. The door represented below *f* is objectionable as it will allow the escape of the effluvia of the manure in to the vegetable cellar. The partition wall will need to be built up closely to the flooring for a similar reason; and the opening at *g* should be ample to secure free ventilation, and prevent gases and odors from rising to the stalls.)

Fig. 3. Main Floor.—*H* is the main carriage floor, 10x38 according to the scale. This will admit the three carriages and sleigh, but not conveniently, as there is scarcely room for them to pass each other readily; while to get out one standing in the middle, would require the running out of another in front or rear of it. The doors, *i*, *i*, slide on rollers at the bottom.—*I* is a room for garden truck; *J* a tool-room; *K* a work-shop; *l* a chimney flue, if a fire is needed in the work-shop; *m* a work bench; *n* a ventilator extending from the cellar to the roof, with flues extending into it from the main and second stories. *O*, *o*, *o*, are six stalls for horses and cows. The mangers *p*, *p*, are placed in one corner of the head of the stalls. A trough, *q*, not represented here, extends along under all the feed boxes, into which water can be thrown from the pump shown at *r*, near the feed box, *s*. Trap-doors, *t*, are placed below each stall for the manure to be thrown through, into the cellar. (We suppose the rear of each stall is to be left open to be entered by the animals from the carriage floor. This is objectionable. Cows might injure the carriages; and besides, the vehicles should be shut off from the stench, and especially from the dust of the stalls and feeding rooms.) The floor of the carriage room may be raised two inches or so above the stalls, if desired, and the stall floors be inclined, and supplied with gutters to carry off urine. (This is important, both for preserving cleanliness in the stalls, and also for increasing the stock of manure.) At *u*, stairs lead down into the cellar; *v* is a bin for oats and grain, or ship-feed, etc.

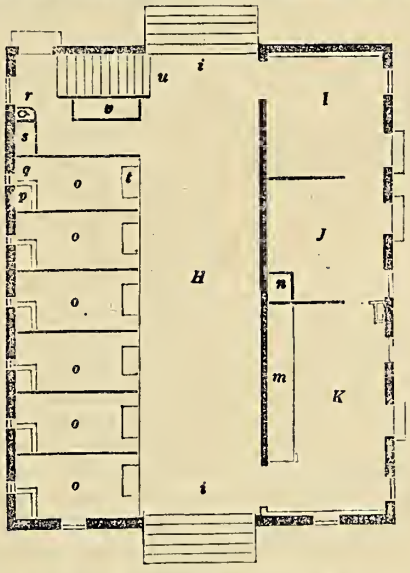


Fig. 3—MAIN FLOOR—OR GROUND PLAN.

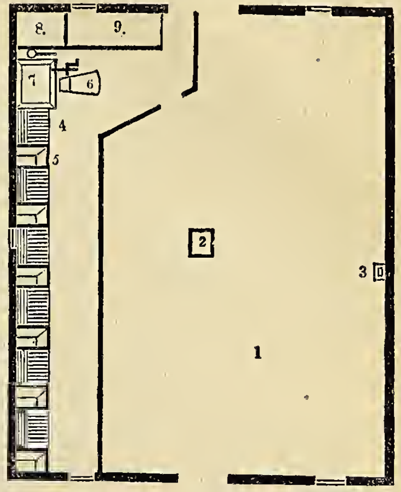


Fig. 4—SECOND FLOOR, OR CHAMBER PLAN.

Fig. 4. Second Floor, or Chamber.—The large room (1) is designed to hold ten tuns of hay, and two tuns of straw; (2) is the ventilator from below; and (3) the chimney. The feeding-racks are shown at (4); and hoppers for throwing down cut feed at (5). A cutting machine is shown at (6); and a box for mixing feed at (7). A feed or grain bin is placed at (8), behind and over the stairway (9). The passage way over the mangers is covered over, at seven feet high, to make room for storing the above.

The roof is designed to be framed with truss rafters, so as to support the beams, leaving the upper story clear for storing hay. The roof is to be covered with the best pine shingles; the outside covering of the building to be of second quality matched pine boards, or be clap-boarded.

The estimated cost of the whole, is in the neighborhood of $1000. This is calculated from the cost of materials and labor in Waterbury, Ct., and would, of course, vary somewhat with the locality where the building is to be erected. [We think from the objections already stated, and from others that will occur to every one, that while the above plan has several good features. it is not, on the whole, so good as the one to which the premium was awarded. (See August number, page 240.) To one feature in this plan we strongly object, viz., the placing of hay-racks above the horses' heads. They allow seed to fall into the eyes and manes of the animals, and the hay is continually exposed to the rising breath. Hay should always be in boxes or mangers below the head, and be put in from the front, instead of being dropped down from above.]

◆

Making Land.—The City of Boston, Mass., is engaged in filling in some two hundred acres of swamp flats immediately west of the Common. The material for filling is brought seven miles on rail tracks, employing ten locomotives, one hundred cars, and an army of workmen. It is estimated that four years will be required to complete the work, and that the land thus made will be worth ten million dollars.

◆

The Potato Rot appears to be extending the present year. Accounts from the West speak of great losses, and a general scarcity is apprehended. In Europe, also, it is said the disease prevails more widely than for many years. In Ireland where this is a national crop, and a failure is a serions calamity, there is much anxiety felt, as the rot exists to a considerable extent,

For the American Agriculturist.

Cheap Building for Storing Roots.

Seeing plans for keeping turnips in former numbers of the *American Agriculturist*, prompts me to give to my farming brothers the benefit of my plan of a very cheap and safe house for storing potatoes, turnips, and all other roots intended for Winter use. It may be built by any farm hand, with proper instructions, with but little more labor than is required to bury a few hundred bushels of roots in the usual way. In the first place, I dig a cellar of a size to suit the quantity, say 16 feet long, 10 feet wide, and 6 feet deep, which will hold about 700 bushels. Over this, a top or cover is built thus: Take two logs, each 20 feet long, and two others each 14 feet long; hew two sides of them, shoulder them together, and lay them on flat stones around the cellar, which will leave a space of 1½ feet from the edge all around. Next take two logs of same length of the short ones, hew one side and lay on the top of them, saddle the ends and put a pair of long ones on, (after the style of building an ordinary log house). Build on up until the sides come together at the top, by placing each log inside of the one below it, giving the sides a slant of about 40 degrees. Carry up one end slanting like the sides, and the other one perpendicular, in which cut a door 2½x4 feet. Fit a box in the back end, as a funnel to use in filling the house; cover the sides and back with flat rails, or rough boards put at right angles with the logs; put on straw, or leaves to keep the earth from rotting the timbers, and cover with the earth that was dug out, about a foot thick; fill in the front between the logs with mortar. Top off with green grass sod, and you will have a mound in your kitchen yard, that will be pleasant to look at. With the mercury far below zero, potatoes keep in my cellar with perfect safety. If deemed advisable, a small ventilator may be put in the top, to take off the moisture without risk. (This will be needed at least until hard freezing weather.—Ed.) P. T. S.

Sandy Spring, Md.

Manure Cellars.

Often as we have set forth the importance of these cellars or pits for the manufacture and preservation of manure, we feel that the half has not been told. Our own successful use of such a cistern induces us to speak of it now. The farmer must prosper, if at all, by savings as well as by gainings. If the banker's vault should have only a small hole where his deposits could be constantly filched away, it would diminish his annual gains decidedly. So if the farmer's stock of manure is continually wasting in sun and wind and rain, he is a great and continual loser.

Manure mixed from time to time with straw, leaves, and other refuse matter, in the open barn-yard, is better than that which is uncared for; but dung, both liquid and solid, carefully saved in a covered pit, and mixed every few days with plaster, charcoal-dust, dry muck, etc., absorbing every particle of urine, and preventing the escape of ammonia, is better still.

Our readers are, perhaps, somewhat familiar with the different methods of making these cellars. We will, however, briefly say, that they may be dug out of the ground, four to six feet deep, and as wide as may be wanted, then planked up firmly, or laid up with hewn logs, the crevices rammed with clay, or they may be built of stones, laid in water-lime cement. They may be put underneath the stables, or partly under and partly outside, but constructed so as to receive the daily cleanings of the stalls. If under the barn, the floors overhead should be made very tight, so as to prevent the rising of pungent odors into the stalls and lofts above.

The providing of good absorbents for use in these cellars, is a very important matter. If one has access to a peat-bog, he is well off. If not, let him go to the borders of his several fields, where the plow and hoe do not reach, and where the turf has become thick and rich; let him cart off an abundance of this, and stack it up under the barn where it will be kept dry. As his manure is thrown into the cellar, let this also go in to keep it company, a little at a time, and often. Or, lacking such turf, let him use forest leaves, rotten chips, scrapings from the road side, or saw dust, or spent tan bark. Be sure and provide as much in bulk of this material as there will be of manure.

This work of gathering up materials for compost may be done at odd spells, when the regular labors of the farm do not press. Gather up everything, and remember that every little helps. We are tired of hearing farmers complain of their hard lot, their scanty manure, bad seed, bad tools, bad horses, bad land, bad everything, when the farmer is more to blame than all beside. Let such fault-finders bestir themselves and act with more energy and forethought. As to manure saving, we have suggested, above, one method, and a good one; but the *method* of this and many other things is not so important as *the doing* of it. Who will *do* it? *

Hints on Green Manuring.

A Pennsylvanian wishes to know what crop will afford a good bite for the cows in the Spring, and also answer to turn in for wheat in the Fall? It is somewhat difficult to pasture a crop, and plow it under at the same time. One can not very well eat his cake and keep it too. Rye furnishes good feed earlier than almost any other crop. But if one expects to make manure of it, it should be left to grow until in blossom, and then be plowed under. If fed through May and June, the growth must be small, and not much benefit will arise from plowing it under. The better way in husbandry is to do one thing at a time, and to do it thoroughly. If the land needs manure, and is so far from the barn that fertilizers can not be carted economically, it is brought into good heart by turning in green crops. When this is done, we should make a business of it, and turn in two crops in a season, or one crop of full growth.

We may sow Fall rye on the corn stubble, as is proposed by our correspondent, turn it in, the last of June or first of July, and sow buckwheat immediately, which will be fit to turn in the last of August. Or we may sow clover in the same way, and follow with buckwheat. This will give two full crops, and restore a very large mass of vegetable matter to the soil. The rotation which our correspondent mentions, viz.; corn, oats, wheat, and grass, would be improved by one year in potatoes or some other root crop. In a farming district so near a good market as Bucks county, Pa., we doubt very much whether green manuring is economical. There ought to be a steady and remunerative demand for animal products—beef, pork, mutton, veal, lamb, butter, cheese, eggs, poultry, etc., and every vegetable product should be consumed upon the farm, and large quantities of manure be manufactured to keep the land in a highly productive state. Where there is a good market for animal products, it is much better economy to manure with animal fertilizers, than with vegetable. If, while the ground is in corn and in roots, it is manured with fifty or more loads (half cords) of good manure, it will bear a crop of wheat, and two or three crops of grass without manure.

The best roots for feeding are carrots, beets, mangel wurzel, and turnips, one, or all of them, according to the circumstances of the farmer and the kind of stock kept. These fed out to stock with hay and grain, make large quantities of manure, and keep the land in good heart.

What our Neighbors Think of Us.

FOREIGN OPINION OF AMERICAN FARMERS.

America is a great country no doubt, but there are some things to be learned yet from our observing neighbors. The following extract from a report on our agriculture made by Mr. Irvine, of the British Delegation, to the home government, contains truths we have repeatedly set forth, but which need to be continually "kept before the people," until a reform is effected. Mr. Irvine says: "The immense extent of territory, and the comparative scantiness of the population, have induced a good deal of carelessness in the cultivation of the soil. The price of land being low, the proprietors have found it more economical to work out their land, than to expend their capital in manures and other means for preserving its productive qualities; and when the soil has become exhausted, the owners have left it for some new settlement. The consequence of this has been that, instead of full and abundant crops, in many parts of older settled portions of the country the fields do not yield at present half as much as formerly, and in many localities not a third, nor even a quarter, as much; and that, notwithstanding the advantages of climate, the facility of transport to available markets, and the lightly taxed condition of farmers and planters, the ratio of increase in agricultural products of the United States is not in proportion to the increase of population."

For the American Agriculturist.

On Management in Farming.

One defect in some of the younger farmers of this day, is want of good management. They begin their errors, perhaps, by buying too much land, and running into debt for it. And this misstep they follow up by other misjudgments in buying tools, cattle, seeds, manure, etc. No sooner do they begin their year's work, than the interest on their borrowed money begins to accumulate; it rolls up, day after day, in rain and sunshine, Summer and Winter, and it eats up no small part of their earnings. They get discouraged, and, as a consequence, work less hopefully, less energetically, and with less success.

Somebody has remarked that in England, where taxes are laid upon everything, it costs about as much to *rent* a farm, as it does in this country to *buy* one. This compels the farmer to be very economical, industrious, and careful in his management of all the details of his year's work. Not a particle of manure is suffered to lie out in the sun and rain, or to leach off into the brooks. Not a square foot of ground is allowed to lie idle, certainly not to grow noxious weeds. Not a hired hand or member of the family, who does not keep busy at work, contributing something, directly or indirectly, to the general stock of income. These things, our brethren in the old country are compelled to do, to live at all by farming. Now, why should not we do something like it from choice, and in order to prosper?

Doubtless, it is sometimes wise and necessary to farm with borrowed money, but it is often a hazardous business. Better work on a little smaller scale, and use more management, than attempt a great deal at considerable risk. That spectre of debt will haunt the farmer day and night, and rob him of much of his peace. Unwise it certainly is for the farmer to buy more land than he needs, to pay for it more than it is worth, and to manage it with no skill at all. First, let him sit down and compute how many acres he actually needs, how he will work them, and how much they are sure to return in profits: then, let him think seriously of purchasing. Nor let him forget that he will want money also for implements, stock, seeds, hired help, etc., and some laid up against "a rainy day." If these things are all taken into the account, he will be somewhat cautious in his investments in land.

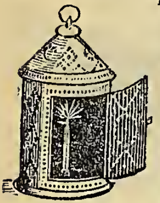
By all means, let nothing be done in a hasty and thoughtless manner, taking it for granted that, somehow or other, all will turn out well in the end. Success will not come by accident. *

For the American Agriculturist.

Blinks from a Lantern......XXII.

BY DIOGENES REDIVIVUS.

HINTS FROM THE CENSUS.



The census man has been round, and we are beginning to get glimpses of the change that is coming over the farming districts of the country. Whoever has made himself familiar with past census returns, has had occasion to notice that in many of the exclusively farming towns in the older States, there has been no substantial increase of population or wealth for the half century ending with 1850. To be sure, such towns are not very numerous in the New-England States, for there, almost every stream is dammed, and manufacturing villages or single establishments have sprung up in most of the towns, to diversify the industry of the people, and to retain them at the East. These manufactories have not only brought in foreigners from abroad, but have made good home markets and offered a large premium on agricultural industry. In all such towns there has been a substantial increase of wealth and population in years previous to 1850. But in the towns where farming was the sole business, there was either no advance, or a considerable falling off. The land was all occupied, and had been for generations, and each succeeding generation found it more difficult to get a living from the hard cropped acres. The blacksmith, the tanner, the shoemaker, and the carpenter found a scanty subsistence among them, but no trade not immediately dependent upon farmers for patronage, found a place in these districts. The old homesteads were handed down from father to son, where the fathers were not fortunate enough to sell out to a stranger, and move with the whole family to the West. The son who remained in the home of his fathers to take care of the old folks, and to inherit the paternal acres as the reward of his filial devotion, was looked upon as peculiarly unfortunate. The lot of the older boys, who, with a good education, could go off to college, or to clerkships in the cities, or to speculation and farming in the far West, was greatly envied. They might make something of themselves, and acquire a fortune. But what could be expected of the poor fellow who had nothing but two hundred acres of worn out land to grub on for a living! He must expect to look poverty in the face as long as he lived, an expectation that was generally fulfilled. If at twenty one his taxes amounted to five dollars, he paid no more at sixty years of age. He had indeed a house and land in fee simple, but in other respects his condition was little better than that of the landless. He worked quite as hard, had as few luxuries, and saw even less of the world.

These farming districts did not even meet the wants of their own home markets. The neighboring village, within an hour's ride, imported butter, cheese, beef, pork, lard, hams, flour, and apples from the West in large quantities. These old States paid out many millions of dollars for these articles, that might much better have been produced within their own borders. All kinds of farm produce were high, far beyond the remunerative price, and yet not high enough to induce farmers' sons to abide by the homestead, and make money by the slow and sure process of tilling the soil. There was no husbandry, in the proper sense of that word, in these districts. Every thing that would bring money, was sold from the land, and nothing was restored to it, to keep up its fertility. The natural resources of the farm were not used to repair the waste of continual cropping. More than half of the manure of the stock was suffered to waste in the atmosphere for want of absorbents and shelter. A few loads of loam from the headlands, or of wash from the hollows by the road side, were all the attempt made to increase the natural stock of fertilizers. The leaves were not gathered from the forest, and the vast deposits of vegetable wealth in the muck and peat beds were untouched. They were regarded as poor, cold, sour stuff, that did the land more harm than good.

The dawn of a better day had perhaps come previous to 1850, but it was not indicated in any of the statistics of the census. There was the same falling off in the population in the old agricultural districts, a decrease in many of the crops and in the number of stock, and a consequent decrease in the value of farms. Thus in the single county of New-London, Ct., a county more favored than many others with good home markets, there was a decrease in

Horses and mules of	823	Wheat, bushels	10,000
Cattle	2,800	Rye, do.	8,000
Sheep	32,000	Oats, do.	33,000
Swine	4,500	Potatoes do.	39,000
Wool, lbs	59,000		

There was a slight increase only in the production of hay and corn. Other counties less favorably situated, would show a still larger falling off in their products.

The last ten years have shown a very great increase in the number, and circulation of agricultural papers. Then, hardly one farmer in twenty read at all upon the science and practice of his business. Now, probably a fifth part of the farmers and small cultivators take some agricultural or horticultural paper, and a still larger number read more or less upon these topics, in the agricultural column of their religious or political paper. There is a demand for such reading, and the daily papers find it for their interest to cater for the tastes of cultivators. Fairs and horticultural shows are multiplied beyond all precedent in this country, and almost every county in the Northern States has its county agricultural society, and many of the cities and villages have their weekly or monthly display of fruits, flowers, and vegetables. It is no uncommon thing to see ten thousand people in attendance upon a county fair, and four or five times that number at a State or national fair. These influences have given an extraordinary impulse to farming, in all its branches. It is apparent to the most careless observer, that we have entered upon a new era in husbandry. The most common indication of a new start upon a farm, is a new barn, with a cellar, or with sheds attached, and large piles of muck in the yard, and long rows of it along the lines of ditches, in swamps, and lowlands. Many are beginning to lay tiles in their drains, and the results have almost uniformly given them new ideas of the productiveness of the soil.

The present census, so far as we have got glimpses of the returns, shows the working of this agricultural reform. In many of these old parishes and towns, there is an increase in the population, for the first census in fifty years. They are no longer hide bound. They have begun to grow. In some of them we find not only a considerable increase in the numbers of the stock—but horses, cows, sheep and swine of much better quality. The value is often doubled. The price of farms has risen. Some farmers have discovered that land may be made to pay the interest on three hundred dollars an acre, and that money invested in well tilled land, is much more productive than bank stock.

The genius of the universal Yankee nation is now turned very decidedly into agricultural channels, and we look for new developments. Great as are the changes already witnessed, the future has still greater in store. The products of some farms have been quadrupled in the last ten years, by the application of skill and capital. What an increase in the wealth of the country if this skill could be made universal! The grand hint of the new census to the Eastern farmer, is, stay at home, and cultivate your present acres. It is not a new home or a new business that is wanted, but more skill and capital in the present business. With these, money can be made on the old homestead, if made at all.

Use the Fanning Mill Thoroughly.

It will pay to clean grain thoroughly before offering it for sale. A careless or dishonest man has little reason to congratulate himself upon having sold a quantity of chaff, cockle seed, and other foul stuff, for the price of wheat. Dealers in grain have sharp eyes for anything that affects the market price, and they readily detect willful or careless neglect to properly clean the crop, and a reduction of from two to four or more cents per bushel is the consequence. It requires but a few pounds weight of refuse among grain to greatly damage its appearance. An amount which would bring fifty cents if sold at the price of wheat, will reduce the market value of twenty five bushels from four to five cents per bushel, thus entailing actual loss, instead of gain, as some, by their practice, seem to suppose. Grain merchants sometimes take advantage of the fact, that foreign matter in grain deteriorates the market value below the actual damage caused by its presence. They put large quantities of poorly cleaned grain through the fanning mill, take out one or two cents per bushel in the weight of foul seeds, etc., and are able to sell the improved grain at four or five cents advance per bushel, all of which might have been realized by the producer, in return for a few hours extra labor.

Hemp in Minnesota.—During the past season, many farmers in Minnesota have undertaken the cultivation of hemp, with very promising results. Heretofore this crop has been mainly confined to Missouri, and Kentucky where it forms a staple. The demand exceeding the home grown supply, makes this a profitable article where it succeeds.

For the American Agriculturist.

The Musk Duck.

This duck, better known as *Muscovy Duck*, is a native of South America. The French naturalists consider it a distinct species and not a variety. The first point that strikes one, is the disproportionate size of the male and female, the latter not exceeding five, or at most six pounds, live weight, while the drake frequently grows to weigh as much as nine or ten pounds.

It is asserted by authors that the epithet Musk has been given to this duck, because it exhales a rather strong musky scent, owing to a humor which filtrates from glands placed near the rump. On account of this peculiar odor, they have nearly been banished from our tables. It is strange that a dish, once in the very highest repute, which graced every feast one hundred and fifty years ago, and added dignity to every table at which it was served, should now be so much out of fashion as scarcely ever to be seen or tasted.

The reason, probably, why this duck at the present time is in such ill-favor, is that old and musky birds have been used. To take away this musky smell, the flesh of the rump should be removed, and the head cut off as soon as a bird of this species is killed. It is then, if not too old, a very good dish, and as succulent as the wild duck. The flesh is at first high flavored and tender, but deliver us from an old bird, which is rank and the toughest of tough meats. But to have this duck in perfection, it should be killed when young, just before it is fully fledged, as it is longer in becoming fit for the table than the common duck. Whatever is said against it, arises, we believe, from prejudice, for we never knew one to sit down to dine off a *young* Musk duck, in good condition, of the age when the wings are just grown, who did not pronounce it really excellent. The flesh is tender, juicy, and not inferior to the wild duck, as the writer can testify.

The Musk duck is easily fattened, and a prolific breeder, and hence, though it is a voracious feeder, it may be rendered profitable to rear. The rearing of the young is not attended with greater difficulty than is ordinarily experienced in raising those of the common duck.

Travelers assert that these birds, in their wild state, perch on large trees that border rivers and marshes, similar to terrestial birds; they build their nests there, and as soon as their ducklings are hatched, the mother takes them, one by one, and drops them into the water. They are as shy as our wild ducks, and they can be shot only by approaching them with the greatest caution.

They are of various colors, but commonly black, variegated with other colors. They are also clear white, slate-blue, and light yellow. The white are considered prettiest, and their flesh the most delicate. The black are deemed the hardiest, the most productive, and to yield the finest flavored flesh.

Their figure is of an extraordinary character, and the shortness of their legs increases their stumpy appearance. The duck has considerable powers of flight, but her mate's heavier bulk retards his ærial wanderings. Contrary to the usual habits of this genus, the top of a wall or the branches of a low tree are favorite resting places. If allowed to spend the night in the hen-house, the female will generally go to roost by the side of the hens, but the drake is too heavy and clumsy to mount thither with ease, and thus they are certainly less aquatic in their habits than the other species, though equally disposed to cultivate a familiar intercourse with man.

Springside, Sept. 1860. C. N. BEMENT.

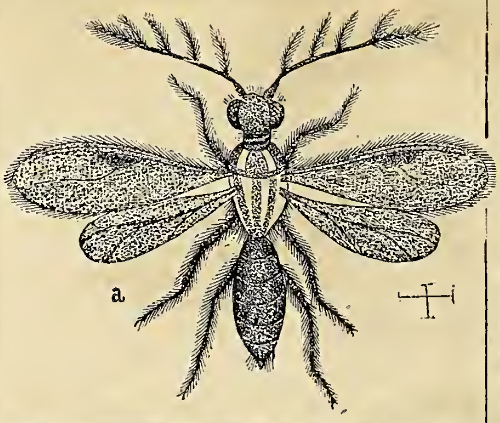


Fig. 1.—Ceraphron Triticum, magnified. The cross lines on the right show the natural size.

Microscopic Views of the Insect World. VI.

BY MRS. CHARLOTTE TAYLOR.

REPRESENTATIVE ICHNEUMONS OR PARASITIC INSECTS.

The Ceraphron Triticum belongs to the division of Hymenoptera, the fifth family of Ichneumonidæ, the Bethylus of Latreille and Fabricius. Latreille designates this family "Pupivora," signifying "I devour," from its being produced in the pupæ of other insects. Mr. Say described one of this family (the ceraphron destructor) in the Journal of the Academy of Natural Sciences, of Philadelphia, in 1817, which Dr. Harris styles the Eurytoma destructor. This fly does not correspond with the above, therefore I have named it "Triticum," from the botanical name of wheat. It is not of such an intensely shining black as Mr. Say's fly, but is rather rusty in appearance, from a few hairs scattered over its body. In some specimens, when very fresh, the legs have a bright tinge of yellow. The antennæ (*b*, fig. 2), are termed setigerous (having the basal joints large) and the last four globular, the intermediate one finished with four long bristles resembling plumes. This is a very sure mark for distinguishing this family according to European classification. The eyes are large in proportion, the palpi three jointed. The fore wings have sub-marginal cells, with a faint nervure running to the apex. The under wings have a long nervure running through, and two smaller ones descending to the inferior region; these are so very slight, that you can only see their existence by a deeper shade of the wings in a strong light, but are evidently nervures, indistinct as they are. The ovipositor is retractile, and tubular. This fly deposites her eggs in the pupa of the Hessian fly. She pierces through the sheath of the leaf under which the pupa is laid—the egg soon hatches, and becomes a very minute maggot, which feeds on the interior of the pupa, and when ready, forms a very minute chrysalis in which it remains, still in the interior, forcing its way out eventually when an Imago, or perfect insect as represented at *c*, (fig. 2. The maggot, as you may suppose, is very minute —it has no marks worth specifying. It has hitherto been impossible to obtain the chrysalis, for as the maggot devours the whole interior of the pupa, it becomes very dry and brittle, crumbling to pieces under the needle, so that only portions remain, which yield no result. This fly can be found in every wheat field throughout the country, from Spring until Autumn. The last deposit remains over through the Winter in the pupa case of the Hessian fly, and is ready to render us its invaluable services as soon as our enemy is prepared to receive it. It usually appears most numerous before sun-rise, as the leaves are then more yielding, being wet with dew.

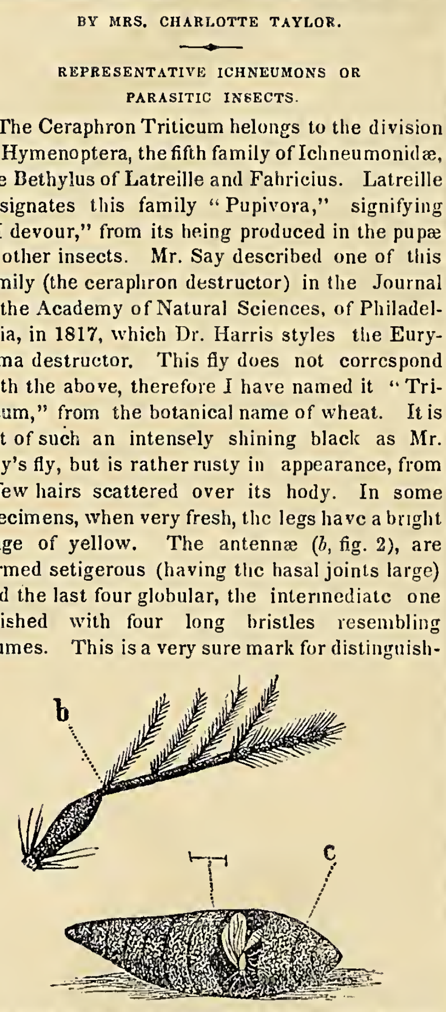


Fig. 2.—*b*, One of the antennæ.—*c*, Pupa of the Hessian Fly containing the Ceraphron.

The next, (fig. 3), is a singular insect, very small, yet larger than its prey. It belongs to the division of Hymenoptera, according to Latreille—and to the genus Cryptus of Fabricius from which it has been separated by Gravenhorst, constituting now his subgenus Pezomachus. This insect is apterous (wingless,) the thorax divided into two nodes, *f*, *f*, (fig. 3); the abdomen with a curved peduncle, *g*; antennæ filiform, with forty joints; palpi six jointed. The ovipisitor is not very conspicuous, as it is retractile, and defended on each side with several strong bristles, which give it the appearance of being larger than it really is. If you will take a strong magnifier, and hunt in the flowers of the wheat for the little Insects, Thrips, you can not fail of finding some of these tiny friends. They resemble black ants, shaded with dark grey, for which I mistook them at first. You will remark how very still this usually jumping, skipping fraternity is—look closer and you will perceive they are hanging by their heads, apparently dead. In time, out will scramble this beneficient fairy, stretching herself in a sunbeam, and as soon as she is dry she hunts around for a mate, and hastens to confer her favors upon us. She deposites her eggs in the larvæ of the Thrips. Each egg soon becomes a very minute maggot, which devours the interior of the Thrips' larvæ at its leisure, and in which it undergoes its transformations. They are found busy among the Thrips as long as they remain, emerging from the dead carcases as perfect insects, *j*, (fig. 4,) and running about "seeking whom they may devour." From analogy I am inclined to believe the last brood adopts the same plan of passing the Winter as the Cryptus, belonging to some species of spiders which descend in the larva state into the ground, constructing a tough leathery cocoon for a Winter's residence, of which a

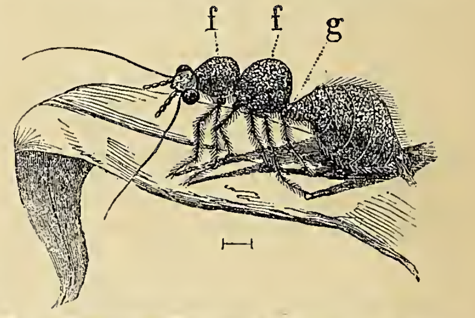


Fig. 3.—Pezomachus Thripites. *f*, *f*, Nodes. *g*, Peduncle

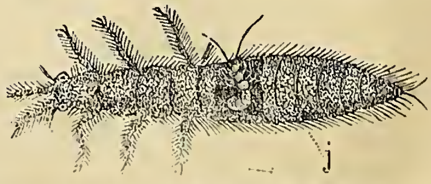


Fig. 4.—*j*, Larva of the Thrips with the insect emerging

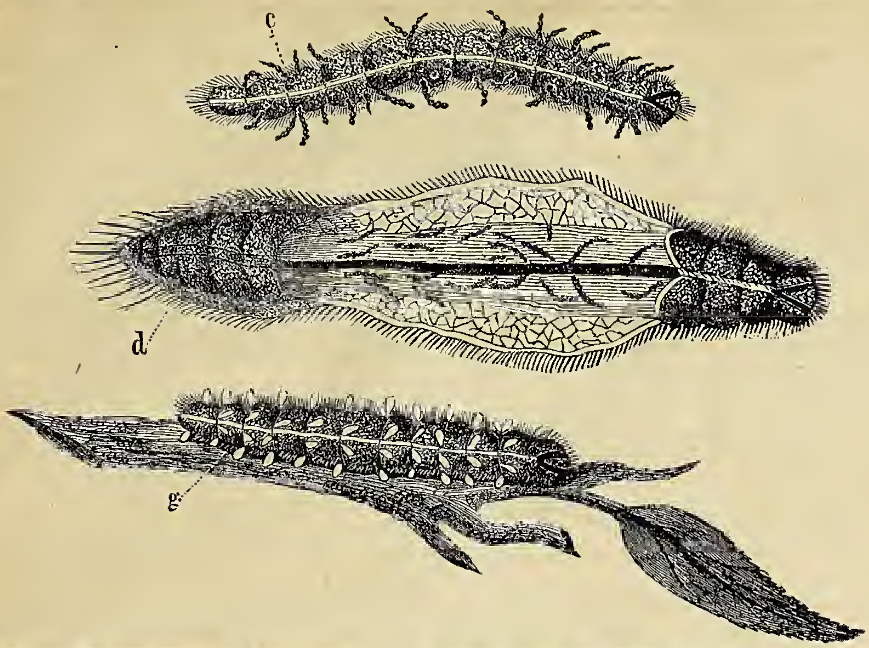


Fig. 6.—*c*, The caterpillar, with worms escaping.—*d*, Caterpillar opened, showing the worms feeding.—*g*, Dead Caterpillar with cocoons.

grain of sand would measure several: but how can any one feel assured of the proceedings of an atom which is barely perceptible to the youngest and keenest vision as an elongated dot? Dr. Harris mentions that there is a similar insect which is often seen emerging from the pupa of the Hessian fly. I have not as yet met with it. In fact the wheat plant is so besieged with insects beneficial and injurious, that a long life time could be consumed in daily discoveries, and not exhaust them even then. The third insect (fig. 5,) is the destroyer of the larva of the white butterfly of the cabbage, turnips, etc., the Pontia oleracea of Harris—therefore it can be called with propriety the Microgaster oleracea. It corresponds very closely with the M. glomeratus of Spinola, which destroys the caterpillar of the Pontia Brassicæ, (Pontia Oleracea, according to Harris,) the cabbage butterfly of Europe. This fly is black, except the legs, which are yellow. The wings have several nervures—a short thick one near the place of the stigma, the palpi six jointed—the ovipositor short exteriorly, the antennæ filiform. She deposits thirty eggs or more between the segments of the caterpillar, sinking them very deep, so as to avoid their being cast off with its change of skin. The caterpillar does not seem to heed this operation any more than we would the prick of a pin, and is very patient under all these wounds. In time these eggs hatch small worms, which feed on the fatty portions of the caterpillar, carefully avoiding the vital parts. They have instinct enough to know if they touched these parts, the caterpillar would die before they had undergone all their changes. The rings of the infected caterpillar become dark, they are generally a bright green, and when the worms are full grown, you can observe the feeding, by cutting one open as shown at *d*, (fig. 6). When they are ready to spin, they eat out of the caterpillar, *c*, (fig. 6), and proceed to spin their cocoons on every part of it, presenting the appearance of pretty little canary-yellow silken globules. The devoted creature can be seen traveling slowly up a wall, a twig, or hiding under a paling, where it glues itself fast and dies, yielding its body to its triumphant little enemies. The cocoons, *g*, (fig. 6,) become faded with the air and light, and are odd looking fabrics stuck over the shell of the doomed caterpillar. *h*, (fig. 7,) shows the worm commencing its cocoon, and *e*, (fig. 8,) represents a finished cocoon with its fastenings. In process of time, the little fly emerges, and is soon at work in our behalf. Thus these small benefactors continue all the bright Summer days, busy performing their mission, which is so effectual in this instance, that out of fifteen caterpillars you may, perhaps, obtain two healthy specimens, the remainder will contain more or less of these parasites.

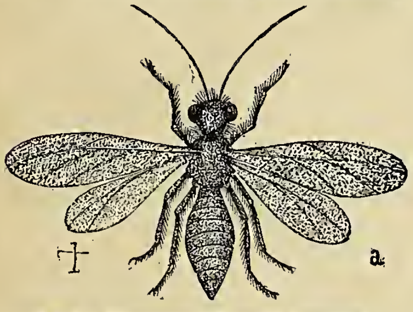


Fig. 5.—Microgaster Oleracea, magnified.

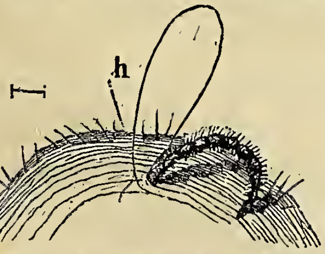


Fig. 7.—The worm commencing to spin its cocoon.

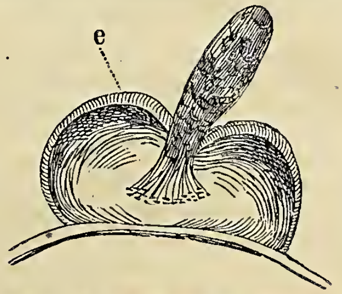


Fig. 8.—*e*, A cocoon with its fastenings.

Do not these small creatures teach a great lesson—assuring us that if we will look around and see our lives in a true christian spirit, we will ever find that if evil is near, we have only to watch with faith—feeling assured that out of it, in time, will proceed the good.

One of the Mosquitoes.—We have heard marvelous stories of these tormentors; as that in some sections they carry brickbats under their wings to sharpen their bills, etc.—all of which were evidently not intended to be credited. The following, however, is related in all truth and soberness, by a daily paper in this city. A gentleman at one of our hotels was awakened by a sensation caused, as he supposed, by bleeding at the nose. Upon lighting a lamp, however, he discovered a stream of blood about the size of a large knitting needle, spurting out from his cheek, just below the left eye. It continued to flow near three hours before he could check it. Upon consulting several eminent physicians, they attributed it to the bite of a mosquito, and said, had the flow of blood continued much longer, the gentleman must have died. We suggest that a police force should instantly be employed to protect our citizens from such murderous assaults, and to instantly shoot every mosquito found at large without a muzzle!—*American Agriculturist.*

This Live World of Ours.

Aggasiz and Gould estimate that there are at least 250,000 *different species* of living animals! When we think for a moment of the number of individuals belonging to each species, we can begin to have a faint idea of the innumerable throng of animated creatures that people this earth of ours, which is of itself only a minor satellite of one of a vast number of solar systems. We said a "faint idea," for who can grasp the magnitude of the figures required to enumerate the individuals of a single species, say of cattle among quadrupeds, or of pigeons among birds, or of herrings among fishes, or of houseflies or mosquitoes among insects—each one of which is a living, breathing, pleasure-seeking animal!—*American Agriculturist.*

$14,000 for Horse Shoes!

Did any one ever estimate the aggregate amount of money expended upon some of the small items connected with industrial pursuits? Take pins for example. Suppose each of 5,000,000 families in our country to use, on an average, five papers of pins in a year—that is, one paper to each individual—and count the price of them at an average of six cents a paper. The cost would amount to one and a half million dollars, and the gross number of pins to *thirty six hundred millions!* How many matches are used? We were led to this thought by glancing over the annual report of the Brooklyn City Railroads, and noticing that this company expended last year *fourteen thousand dollars* for the single item of horse-shoeing. What is the gross amount paid in our country for shoeing horses? How many of these shoes are put on in the best manner? After considerable experience in this line, with various horse-shoers, we have never met with but one really *first-rate* horse-shoer. How much is suffered by our noble animal for want of proper skill and intelligence in this line. Could we get the materials, we should like to publish a good book, or even a periodical devoted to this single specialty. As it is, we are troubled to find good articles for an occasional column in the *American Agriculturist.*

An Agricultural Exhibition was held at Adelaide, South Australia, in March last, at which it was estimated 8,000 visitors were present. The show of wheat was especially fine; a sample of the first prize seed wheat weighed 66½ lbs. per bushel

Shall we Plow in the Fall?

All lands, except light loams and sandy soils, are benefited by Fall plowing, unless they are exposed to washing. Steep side hills should never be plowed in the Fall, unless you sow them immediately with grain or grass seed, to furnish roots for holding the soil in place.

But all heavy loams lying flat, and clays, are greatly benefited by Fall plowing. The teams are generally in the best condition for plowing at this season. They have had good pasturage through the Summer, and, as a rule, have less to do than in the Winter and Spring. It puts the Spring work very much ahead to have all the green sward turned over in the Fall. However much of this may be done, the teams will have enough to do in the Spring, in carting manure, cross-plowing, harrowing, and getting ready for sowing and planting.

In the Fall, the lands that are most benefited by plowing, are generally in the best condition for the operation. In the Spring, they are often so wet that they can not be plowed until May or June. Now they are dry, and will crumble as they are turned over.

By plowing now, they are prepared to receive the full benefit of the action of frost, rain, and snow through the Winter. There are no disintegrators like the elements. Stiff clays and hard-pans are made loose and friable by these exposures. The more rough and broken they are left by the plow, the better. Then, there are rough pasture swards full of brush and rank weeds, and reclaimed swamps with a thick turf of swamp grasses, that are best subdued by tearing them up now. They freeze and thaw through the Winter, and little life is left in them by Spring.

Besides this, plowing has an important influence upon insect life. Many insects burrow in the earth, and if left undisturbed, come forth with new life in the Spring. Plowing disturbs their Winter arrangements, and kills myriads of their larvæ. At this season the soil may be safely plowed deeper than in the Spring. The inch or two of yellow soil will undergo important changes before Spring.—*American Agriculturist.*

How to Get a Farm in the Forest?

"A new home in the West! Who will follow?" is an old cry still uttered. There is much land to be possessed both at the West and at the East; for land is so cheap, and the country has been so rapidly settled, that immense tracts bought up by speculators, or overlooked as of inferior quality, have been left, like the wilderness upon the borders of civilization. In the oldest States, we find thousands of acres of land untouched by the plow, and in some of them, whole sections or townships still covered with the primitive forest. The prairies of the West already cleared and ready for the plow, have drawn emigrants thither, while large tracts of heavily timbered lands near good markets, have been passed by.

How shall a young farmer who has plenty of muscle, but little cash, get him a home in the shortest time in one of these new regions? We will suppose that he has bought his quarter section, and paid for it, and has a few hundred dollars left for his buildings, stock, and farming tools. He wants every thing all at once, but must, of necessity, wait some years before he can have a finished home, and surround himself with the comforts of a well cultivated farm. What shall he do first, and what shall he wait for?

The common ambition of making a clean sweep of the forest, is to be avoided, especially upon the new lands in the old States. It can not be long before they will be needed for timber, and will pay a good interest on the investment, if spared for this purpose. It is common to girdle trees in the forest, and to put in a crop the following Spring, without waiting to clear the land. The trees die along in mid-summer, and the corn ripens tolerably well, and half a crop is sometimes realized the first season. The land is plowed the second season, as well as it can be, and the plowing hastens the decay of the roots, and the fall of the trees. In four or five years, most of the trees have rotted down, or blown over, and been gathered and burned in heaps upon the land. This is the almost universal practice in the Southern States, particularly in the cotton region, where the warm, moist atmosphere hastens the process of decay. This is a cheap process of getting rid of the timber, but requires time. It may do to apply this process in our northern forests, where there is no market for wood or timber, at least to a part of the first clearing.

Another method is to cut down the trees, and with oxen pile them in large heaps, and burn them. This clears the land of everything but stumps, at once, and prepares the way for a full crop the first season, if the land is plowed. But it costs a good deal to clear land in this way, generally several times more than the price of the land. The extra yield of corn and potatoes, however, is usually enough to make up the difference in price. It will do to clear a few acres in this way the first season. A part of it may be plowed, and cultivated with corn and potatoes, the first season.

As grass and hay are prime necessities, another part may be sown with grass seed as soon as the ground is burnt over. The seed will catch on the new burnt soil without plowing, but would do better to be scratched in with a bush harrow, or cultivator. It may be sown either in the Spring upon the last snow, or about the first of September. If herds-grass and clover are sown, the cows will have a good bite the year after sowing, or, if the ground be fenced, there will be a good hay crop.

A pasture may be prepared by simply girdling the trees, turning over the ground to clear it of leaves and branches, and sowing grass seed. This will furnish grass for a few years, until there is time for more thorough preparation. Avoid the passion for small lots. Many settlers spend strength enough to clear a farm, in making fences. Twenty acre lots are much better than two acre lots, and make a very great saving in the preparation of the land for tillage.

Another error to be avoided in a new country, is the idea that a virgin soil is always to maintain its fertility without manure. From the first start, provision should be made to save every thing in the shape of manure. If the barn is a log barn, let it have a cellar, and sheds or hovels at the sides of the yard, where manure can be mixed with leaves or muck, and be protected from the weather until it is wanted for use. The pigs also should be yarded, and their manure be saved. It is comparatively easy to keep a virgin soil in an improving condition. It is a very expensive process to restore its fertility, when lost. Much as a young farmer wants money, he wants a farm still more, and it will be a very bad move for him pecuniarily, to enlarge his bank stock at the expense of his farm. Many a man loses his farm in his effort to fill his purse. New land may be so cultivated as to lose none of its fertility. All the surplus funds of the young farmer may be safely invested in his land and buildings for the first ten years. The capital will pay better there, than in any other place.

Another common error of farmers in new countries, is to sell only vegetable products—grain, hay, flax, cotton, tobacco, hemp, etc. This is sometimes a necessity, but is always bad policy. Upon these new lands in the old States, it is generally practicable to sell animal products. Cattle and wool can be raised at points remote from market, and pay a handsome profit. In raising a horse or cow, manure enough is left upon the farm, if it is properly cared for, to prevent the deterioration of the land. The dairy business is still better for the soil, for it keeps the animals still longer upon the farm, and makes more manure.—*Written for the American Agriculturist.*

How I Became a Farmer.

VALUABLE EXPERIENCE OF A MECHANIC TURNED FARMER.

To the Editor of the American Agriculturist:

Will you allow me a little space to record my experience?—not because it contains any thing very remarkable, nor that I think it valuable because it is mine, but that others who are situated as I was, may, perhaps, see the way to realize what they have long been waiting to secure, a home in the country. I was born and reared in New-York city, and save an occasional visit to friends living in the country, I knew nothing of farm life, until within the past few years. I learned the cabinet maker's trade, and worked at it steadily for twelve years. During that time I found a use for articles of my own make, to the extent of six chairs, with other things in proportion—four children having fallen to our lot.

Having no capital, I was obliged to remain a journeyman, or do piece-work, and any one knowing the active competition that has prevailed in this business, can readily believe that, after making both ends meet, at the year's end there was but little left to lap over with. As my little ones grew up around me, regard for their health and morals, and anxiety to meet increasing expenses, incited me to try and secure a home in the country.

In the Spring of 1854 I received an offer to work in a village in this county, which I gladly accepted, as it brought me one step nearer what I desired. I looked about for a place a little out of the village, where I could have a piece of land to cultivate, believing that if I could but make a beginning, I could work out to the end. I found a comfortable house with two acres of ground attached, at a moderate rent, and it would have done you good to see the delight of the little ones when we took possession. They had never conceived of such extensive playgrounds, having always been confined to a narrow back yard, and an occasional walk in the crowded city street.

I stipulated with my employer for time enough to work my garden, and made a commencement. It was awkward business I assure you. My neighbors must have laughed at my simple questions; but they were very kind in advising and aiding me; and moreover, having seen a copy of the *Agriculturist* and at once subscribed for it, I soon had the satisfaction of seeing my own vines and eating their fruit, and the probability of some day sitting under my own fig tree became quite inspiring. Being entirely ignorant, I was not afraid to try what I saw recommended, and though I was sometimes laughed at for following the book, as they called it, I learned, in time, that *printed experience* was often as valuable as that learned by word of mouth—in fact, some of my vegetables, raised in what they called "new fashioned ways," were far superior to any that my neighbors could show.

To be sure, I had many failures at first. The bugs would destroy the vines, the hens scratched out some of my finest seeds, and some of my plantings turned out nothing, because of my ignorance, but at the end of the first Summer, I found that by working morning and evening, with an occasional day when the weeds threatened to get the start of me, and with only a little paid out for manuring, plowing, and preparing the ground, I had a full supply of choice vegetables for the family, had sold enough to help pay the store bills, and had learned sufficient to try gardening on a larger scale the next season.

I then ventured to hire two acres additional, in which, besides giving better pasture for my cow, I could plant a patch of potatoes and another of corn. It was a good year with me. A large strawberry plot which I had set out the previous Spring, according to directions in the *Agriculturist*, yielded finely. The fruit sold at good prices, and brought me nearly $40. Other products of my garden were even beyond my expectations, and the corn and potatoes would have done honor to any farmer. This was not all. The family were never so healthy, and my two boys were becoming quite expert in the garden, to their advantage and mine also. We worked hard, but we saw the fruits of our labor and were content.

I now felt it safe to invest my little capital of a few hundred dollars in buying a place which I could call my own; and the next Spring received a deed for ten acres of land, a little more distant from the village, but yet near enough to enable me to continue my regular business. I did not feel quite ready to give up my trade, at which I could make a comfortable living, though it was becoming more and more irksome, and I longed for the time when I could lay down the saw and the plane, and take hold of the plow and the hoe. This year I hired a young man to assist in working my new land.

It is not necessary to give further details. I am now a farmer, and have arrived at that dignity one step at a time. My place is not large, only twenty five acres, but six of those are in fruit, and I count their produce equal to all the rest. The great point I want to make for the benefit of others, is, that a change to farming, to be successful, must be made *gradually*. There are thousands of discouraged mechanics that can do as I have done, if they will but work patiently, and be content to become farmers by inches. If I had bought twenty five acres of land the first season, and depended upon cultivating it for a living, I am convinced I should have failed, with the loss of my capital and my courage, and gone grumbling back to the shop. Now, wife and I feel as happy as mortals can ordinarily, and I am prepared to say to my brother mechanics, "go and do likewise." GEORGE TERRET.

Putnam Co., N. Y.

Miniature Cows.

A writer in the Agricultural Gazette, England, thus describes the *Bretonne* cow imported from Brittany, France, one of which he has lately purchased: "she stands *three feet* high, will calve shortly, and promises to have a bag of milk nearly, if not quite equal to an Alderney. She is too years old. Two dairymen have pronounced judgment upon her to the effect that she is a perfect little wonder, and will be likely to give eight quarts of milk per day with her first calf. These animals are just suited for gentlemen's families. They are of diminutive size, hardy, and little eaters, and furnish pure milk for a family's consumption." [Would not this breed be the very thing for our suburban residences, where an acre or so of lawn, is all that can be afforded? Our agricultural societies have been paying premiums for the largest breeds, who will encourage importers to furnish us smaller animals, say of convenient *pocket* size!—*Ed. Agriculturist.*]

Premiums for Fast Walking Horses.

Lewis B. Brown, Esq., of New-York, a life member of the N. Y. State Agricultural Society, has placed at the disposal of the Executive Committee $25 for premiums on fast walking horses. The Board have accepted it, and offer $15 for the best and fastest walking span of matched horses or mares, and $10 for the best and fastest walking horse, mare, or gelding. The same gentleman donated a like amount, $25, as a premium for the fastest walking horse exhibited at the National Horse Show at Springfield, Mass. We are glad to so soon see carried out the suggestions which were offered on this subject in the *American Agriculturist* of August last, (p. 270.)

Arabian Horses.

During the travels of Hon. Wm. H. Seward, in Syria, he was presented with several fine Arabian Horses by Ayub Beg Tarabulsey, one of the magnates of that country. The N. Y. State Agricultural Society, at a late executive meeting, appointed a committee to confer with Mr. S. in relation to their care. So good an opportunity to improve our American stock is not often enjoyed, and the subject may well claim the attention of the Society whose work it is to advance the interests of all that relates to Agriculture in this State. There are three animals, one stallion and two mares, all of which will be exhibited at the State Fair at Elmira. They are reported by those who have examined them, as animals of the very highest grade. The stallion and one mare are intended for breeding, the other, Mr. S. will retain for his own personal use. Due notice will be given of the place where the horse will be stationed the ensuing year.—*Amer. Agriculturist.*

Importation of Blooded Stock.

An importation of blooded horses and cows from England, recently arrived at Philadelphia, *en route* to Kentucky. There are nine mares, each one year old, of the best stock in Europe, and which cost from $2,500 to $3,000 each. The cows number fifteen, and are all fine specimens of the Alderney breed. The latter are the property of Mr. Thomas Richardson, N. J. This breed of cows has recently attracted increased attention in this country, specimens of the stock having formed quite a noticeable feature at agricultural exhibitions.

SALE OF KENTUCKY HORSES.—An annual sale of blooded horses is held at Woodburn Farm, Woodford Co., Ky., which is largely attended by stock men from all parts of the Union. This section of the State is considered head quarters of fine racing stock, which usually command high prices. The sales this year were less spirited than on former occasions. $500 was the highest figure obtained for any one animal—others ranged from that down to $50. At another sale in the same neighborhood, purchases were made at higher prices, $2,250 being paid for one stallion and $1010 for a mare.

VERMONT HORSES FOR NAPOLEON III.—Five splendid Morgan horses from Vermont were shipped on the Vanderbilt Steamer for Louis Napoleon. They are of deep bay color, and cost from $1000 to $1500 each. Three more animals of the same stock, were also taken out more recently by the Arcadia for the same party.

LARGE IMPORTATION OF SPANISH ASSES.—A drove of Spanish stock asses, consisting of eighteen jacks and seven jennies, lately arrived in this city on the steamer Vanderbilt. They were purchased in Spain by Dr. Wilson and Mr. Warren, who drove them over the mountains and through France to Havre. They are fine animals, some of the jacks standing fourteen and a half hands high. One of them is valued at over five thousand dollars. We believe they are to be taken to Louisiana.—*American Agriculturist*

Windmills versus Moles—Rose Bugs.

To the Editor of the American Agriculturist:

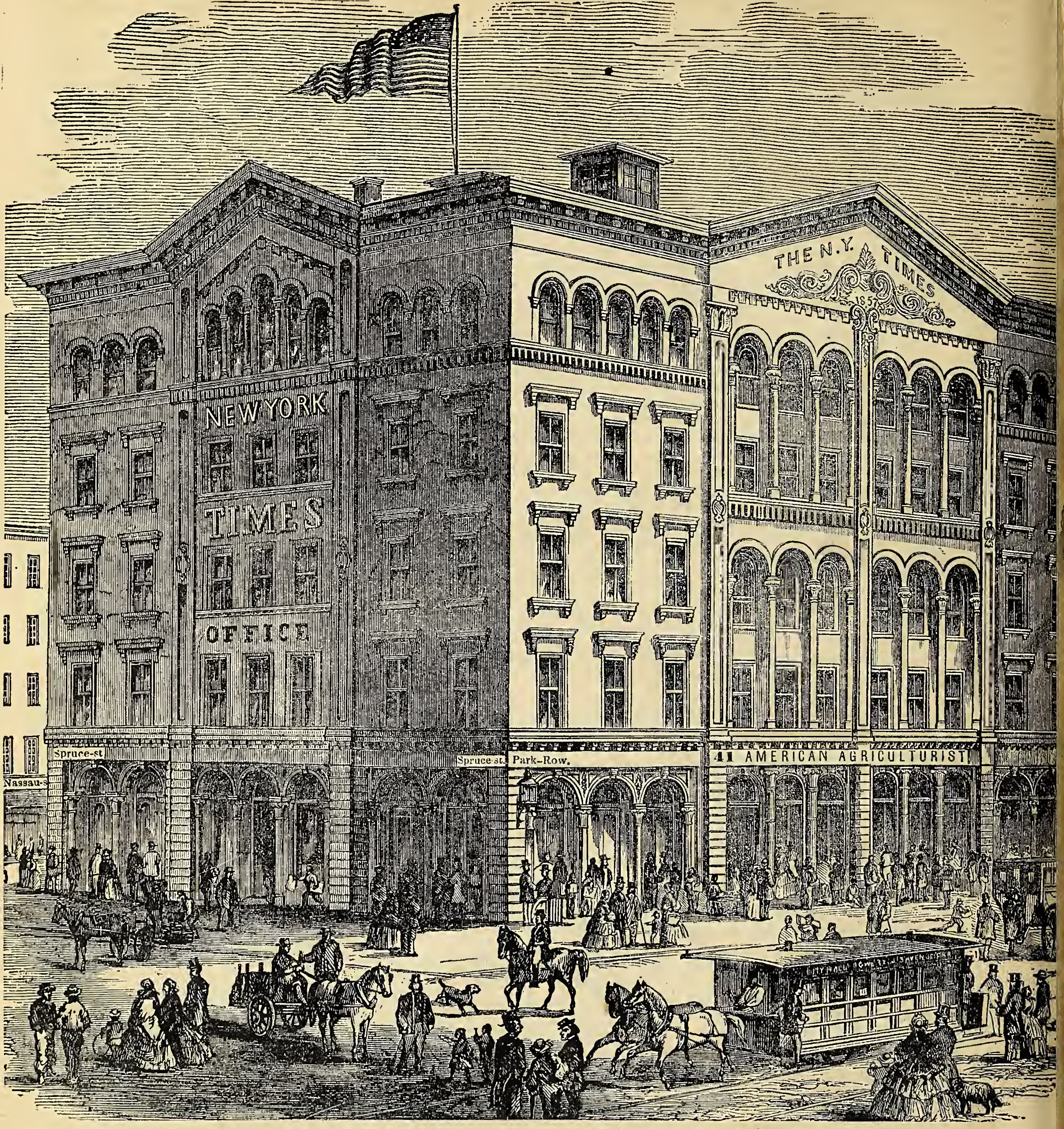
You complain of the destruction caused by moles, and I can sympathize with you. I had a fine plot of New-Rochelle blackberry plants and another of dwarf pears, with which I took much pains. During the drouth I mulched them according to the suggestions of the *Agriculturist*, but was surprised to find that many of them were drooping and dying. Upon examination I found that the moles had mined among the roots, their track being concealed by the mulch, and they destroyed 200 of the blackberry plants, and 25 of the pears. Traps will catch some of them, but I think they can be frightened away, as they are very timid. I have observed that if a person step anywhere near their track, they will stop working, and remain quiet for a long time. Their hearing appears to be very acute, as they will perceive one's approach at quite a distance. I propose that a number of small windmills be placed on stakes not very high, and that each have a clapper attached, to strike on a box. I think the noise and jar will frighten them away from the grounds.

Now then, in return for this suggestion, can any of your readers inform me of a certain remedy for rose bugs. They are very numerous and do great damage in this vicinity. To kill them by hand-picking is a hopeless task, where there are millions of them. P. H. FOSTER.

Suffolk Co., N. Y.

[The windmill remedy may answer, provided a sufficient number be erected. We fear however, it would require a man and a boy to whittle all Summer to protect an acre of ground in this way. Perhaps a few set around a field might keep them from entering, but the question is how to expel them when they have fairly taken possession. For the rose bug we know of nothing but hand picking, or shaking into pans of hot water, and deeply plowing the soil late in the season, so as to expose the larvæ to hard freezing. Strong solutions of whale oil soap are rather distasteful to them, but they soon overcome this repugnance.]

BOW! WOW!—All unmuzzled dogs found running at large in this City during the Summer months, are liable to be taken to the dog pound and destroyed. The number of captures the past season amounts to 5,860. Probably not more than one dog out of four is thus disposed of, which would give more than 23,000 dogs to N. Y. city alone. A report of the number of dog licenses issued in Massachusetts, according to law, shows that community to be blessed (?) with 32,707 canines.—*American Agriculturist.*



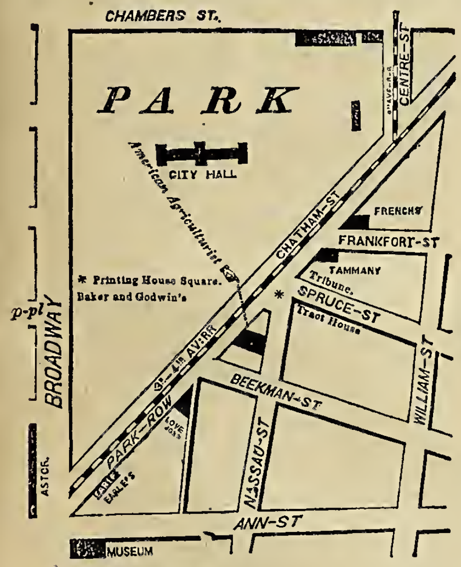
NEW OFFICE OF THE AMERICAN AGRICULTURIST, NO. **41** PARK-ROW, NEW-YORK CITY——SEPTEMBER, 1860.

The friends of this journal will be pleased to learn that we have secured, and removed into large and beautiful rooms in one of the most eligible positions in this City. Our office has been located for many years at 189 Water-st., where it was near a majority of the agricultural warehouses to which farmers largely resort, but the rooms were comparatively limited, inconvenient for the amount of business done, and they were out of the *newspaper* center of the city. Our present office is all that could be desired in point of size, convenience, and central location. The principal business office of the *Agriculturist* is on the first floor of the "Times Building," one of the largest and most beautiful structures in the city. It is constructed almost wholly of stone and iron, even to the rafters, beams, flooring, etc., so that it is absolutely impossible for any part of it to be burned down. The furniture and materials in any room might be burned without at all disturbing the occupants of an adjoining room. Our main business office extends from No. 41 Park Row, through to 151 Nassau-st. (Strangers often confound *Park-Row*, with *Park-Place*. The PARK is a triangular open space, containing about 11 acres, [see diagram on next page,] bounded on the west or northwest side by Broadway; on the northeast by Chambers-street, and on the south or southeast by *Park Row*, which begins between the Astor House and the Museum, at the lower point of the Park, and runs a little north of east into Chatham street. *Park Place* is a short street, beginning at *p-pl*, on Broadway (nearly across the Park from our office.) and runs two blocks westward, towards the Hudson, or North River.

The Park and City Hall are opposite to us on the front, and the 3d Avenue and 4th Avenue Railroads, coming down from the Harlem and New-Haven Railroads, pass directly before our door on Park Row. By referring to the large engraving, and to the street diagram below, it will be seen that the Times office is on one side; the Tribune office just across the corner. Most of the leading newspapers are not a stone's throw distant. Just below our office, on the same block, are, in order, the offices of the Ledger, Chronicle, Observer, Century, World, Scientific American, etc. Across Beekman-st., are the offices of the Independent, Evangelist, Methodist, Horticulturist, etc. A block further are the offices of the Herald and Sun. Just above our office, on Nassau and Chatham-sts., are the offices of the News, Frank Leslie, Day Book, Staats Zeitung, N. Y. Demokrat, etc., etc. The opening just above us is called Printing House Square. So, we are literally surrounded by newspaper offices; and the *Agriculturist*, representing the great agricultural interest, upon the prosperity of which all other pursuits depends, appropriately has its office in the very midst of the Metropolitan Press.

The PARK is the point where travel concentrates, and diverges, and all our readers who visit the city, will find it very convenient to make a passing call at the office of the *American Agriculturist*, on business or otherwise.

The composing (type-setting) rooms, etc., of the *Agriculturist* are over the main office. The stereotyping, steam press, and mailing rooms, still remain in the old location on Jacob street.



Exhibition of Agricultural and Horticultural Products.—As above stated, the office of the *Agriculturist* is entirely fire-proof, no wood being used in its structure. We have ample space for the display of fruits, flowers, and interesting specimens of the products of the soil. We therefore invite those having objects of special interest to exhibit, to send them here, where they will be seen by thousands. It is our aim to ultimately make this the "head-quarters" of agriculture and horticulture in the Metropolitan city—a sort of "AGRICULTURAL EXCHANGE."

The Indian Summer.

This beautiful, almost fairy season, is nigh at hand. It sometimes occurs in October, though we believe it is not regarded as genuine and orthodox, if it appear before November. For ourselves, we are glad to see it at any time. Why called 'Indian Summer'? you ask. The only reason we ever heard of, was, that during this period the Indians are accustomed to gather their stores of corn and rice and nuts for the Winter.

Mr. Merriam, and everybody else who owns a thermometer, has observed that from the end of August to the end of September, there is a gradual and constant diminution of heat; but that, about the middle of October, a change occurs, and for two weeks or more, there is, with slight exceptions, an increase of daily heat. This is not peculiar to our continent. In northern Europe and Asia, there is a period known as "the second Summer," the "afterheat," setting in just before the beginning of Winter. But in America, this period is marked by one feature almost unknown elsewhere. We refer to the brilliant changes of the foliage of the trees. It would seem as if Nature were trying to conceal the decay which is stealing upon her, by the increased gorgeousness of her apparel, and the Spring-like youthfulness of her voice and air. But let us not slander her.

This change in the hues of vegetation is indeed perceptible somewhat in September. It begins, in a small way, before frost; but the most sudden and brilliant colorings are produced by icy Jack. Sometimes, he does his work at odd spells throughout October and the first part of November; sometimes he does the most of it in a single night. And what a grand exhibition he makes! At his touch, the oak turns a rich brown, or reddish purple; the birch and larch are yellow; the tulip-tree a rich lemon color; the peperidge fiery scarlet; the maples nearly every tint from green to gold and crimson, and scarlet and pink; the evergreens retain their original green and set off the other hues in fine contrast.

One gets a fine display, if he can command the view of a range of wooded hills ascending by gentle slopes; he then sees the tops of the trees, in all colors, and fading off into the distance. And the effect is still further hightened if the sun is declining behind the hills. The oblique rays glancing through the many tinted leaves, give them increased brilliancy, and suggest at times the idea of a forest aglow with fire. Then again, this brilliancy is often subdued by a haze of blue vapor and smoke.

Attempts have been made to represent the phases of Indian Summer on canvass, but as yet with only partial success; no coloring, and no verbal description can place it before the eyes of one who has not beheld it. And, what adds to the charm of this season, the temperature of the air becomes milder than it had been for several weeks; on some days, it is balmy and still and voluptuously soft, beyond anything in the sweetest day of June. These are the days for enjoyment, perhaps beyond any days of the round year. As to a scientific explanation of these various phenomena, we do not propose now to attempt it, but will refer our readers to our remarks on the subject last year.—*American Agriculturist.*

The Largest of all Flowers.

The largest flower in the world, yet discovered, is from the island of Java, and is called the *Rafflesia Arnoldi*. The blossoms measure, on an average, two feet in diameter. We Americans are wont to think a good honest Sun-Flower large enough, but this exceeds it. And yet, strange to say, the seeds from which this mammoth flower are grown, are so small that a magnifying glass is needful to make them clearly visible. In a climate like ours, they could be raised only in a hot-house. Who will now tell us the name of the *smallest* flower in the world?

A Talk about "Horticulture."

Few things have pleased us more, in our travels the past Summer, than to witness the increasing taste for horticulture in all parts of the country. And this taste is not confined to people of wealth. The farmer, the mechanic, the doctor, and the clergyman—indeed, all classes and professions—have imbibed a generous enthusiasm for planting trees for ornament and fruit bearing, a zeal for lawns and shrubs, and flowers, and gravel walks, and whatever else gives grace and attraction to country life. Brother Jonathan has got a reputation for overdoing things sometimes, but in this we hope he will be discreet, and make a steady and healthy progress from year to year.

Why should not the farmer's premises, costing perhaps from two to five thousand dollars, be just as well arranged and well-kept in their way, as the grandest estate of the very wealthy, costing as many millions? The latter may astonish the beholder, and make him wonder at the achievements which wealth can perform; but the former will surely please every eye, will excite nobody's envy, but will show that real comfort and real beauty are within the reach of all. The latter suggests the inquiry whether such enormous riches could be acquired in a perfectly honest and legitimate way, without fraud or extortion; also, whether so much glitter and magnificence can consist with purity of heart and life, with peace of conscience, and domestic happiness and religious devotion. But the former leads us to say: that man is well-to-do, and he knows how to live. He has inherited or acquired a little property, and he means to enjoy it as he goes along. His embellishments are natural and appropriate to his condition, and if his home outshines his neighbor's at all, it is owing chiefly to the industry and taste of its occupant, and it is so much to his credit.

We wish there were more of such homes. And we have sketched this little picture, not merely for the admiration of our readers, but for their instruction and their imitation. A cotemporary journal well says: "How many people ever thought that it is within the reach of farmers of only moderate means to have a more beautiful home than the Marquis of Westminister, or the Duke of Sutherland, the first of whom has the most costly residence in England, and the last can ride seventy miles in a straight line on his own land? And yet, the ordinarily successful farmer can have a residence on which the eye of the just and generous, the unperverted, may rest with more pleasure."

So say we. Some time since, it was recorded in the papers of the day, that the late Elliott Cressen, of Philadelphia, had bequeathed a legacy of $5,000 to be employed in planting trees in his native city. The announcement was touching to us. The benevolent man loved trees, next after his own household. He appreciated their usefulness and beauty. He knew that their leafy garniture would highly adorn the city he loved, and would promote the comfort and health of its inhabitants. Perhaps also he said to himself, monuments of marble will crumble and fall, while my oaks and elms will flourish in perennial vigor and beauty.

Let us all plant trees. Plant the fruit-bearers. They will soon begin to reward our labor, and will be a useful legacy to our children. There is little danger that the market will be overstocked with fruit, and what crop is more easily raised, or more remunerative? Plant pears, apples, plums, cherries, apricots, peaches, and by no means forgot the luscious grapes. Plant ornamental trees. Set them by the roadside, to refresh the weary traveler. Set them on the lawn, singly or in groups. Set the dense-headed maple and horse-chestnut, the swaying elm, the solemn pine, the sturdy oak, the trailing willow, the symmetrical fir, the feathery hemlock. Set trees around the bald and naked church. Oh! how the sun glares upon it, and into it, blinding the eyes of the worshippers. Plant them around the school-house. Children's minds will develop finer if they are continually surrounded by objects of grace and beauty.

More might we say, for it is a favorite theme, but here is a sentence or two from a religious journal which so chimes with our own thoughts that we prefer to pause and listen: "There is a softening, humanizing influence in gardening that we could wish were more general. There is too much danger of the gross and sensual and selfish in our national character; and while our reliance must be on religious and educational influence to correct this tendency, we believe that good, and only good, would come of the love of trees and flowers, and the cultivation of both. It may be blessed in leading the heart up to the love of the Rose of Sharon and the garden of God."

A Trouble among Hedge-Growers.

Many persons desire to construct hedges along the lines of their fields and gardens, where large trees are already growing; yet they find it difficult to do so. The shade of the overhanging trees is injurious to them, (though some hedge-plants endure it better than others,) and the large and voracious roots of the trees are still more harmful.

The other day a friend came to us with a woful face, saying that he had tried for two years to get up a continuous line of buckthorn hedge in front of his lawn. Before setting out his plants, he had trenched the ground for them four feet wide, and had enriched it with old manure; he had bought the best plants which the nurseries afforded, and had set them out with much care, and yet at several points for six or eight feet in a line, his plants had dwindled, turned brown and died. He had renewed his soil and his plants a second year, but with a like result. What was the matter?

Our first inquiry revealed it. What trees are growing in the neighborhood of your hedge? Only two large black walnuts, a rod from the hedge, and a rod apart. That was enough. The roots of these trees are gross feeders; they extend into the soil cultivated and manured for the buckthorn, and abstract the moisture and food from the young plants, so that they can not flourish. We therefore advised our friend to open a trench two feet deep between the trees and the hedge, and to cut off the roots of the trees, and to repeat this at the same place annually. If he did this, we thought the drip and shade would do the buckthorn no material injury.

We have seen the same thing under the white ash and the tulip tree. Indeed, all trees like these, which have a dense mat of small, fibrous roots suck up the moisture in a remarkable manner, from all the soil where they penetrate. It is a waste of time and money and patience, to try hedge-growing under such difficulties. Indeed, the only way to get up a perfect hedge, is to set it where it will never be shaded by trees of any kind, nor be interfered with by their roots.

Fruit Trees injured by Sea weed.

We were recently in an amateur's fruit yard, and had occasion to notice the sickly appearance of the pear trees. They had been out some eight years, and in all previous visits, we remarked their rapid growth and healthful appearance. We hardly know of a finer yard. This year the leaves are blighted on the edges, and some of the trees have made very little wood. On inquiry, we found that rock weed in a fresh state had been freely applied to the trees last Fall. This accounted at once for the change in the appearance of the trees.

A little salt is undoubtedly a good thing for pear trees, and indeed for almost all garden fruits and vegetables, but in excess it is dangerous. The sea weeds, especially rock and ribbon weed, or kelp, are powerful fertilizers, and if directly from the water, contain a good deal of salt. They should be composted with muck, before they are put around fruit trees. If the weeds are mixed with, say three parts of muck to one of weeds, and after lying two or three months are forked over, they may be applied with benefit. *

Neglect of Pruning.

We noticed recently in a pear orchard one of the consequences of imperfect shortening in. A few of the Bartletts were loaded with fruit, and the branches were bent to the ground. The wood was quite too slender to hold up the fruit. We could see that some of the annual growths had been left two feet or more in length, and no pains had been taken to bring the limbs out at an obtuse angle to the trunk of the tree. Had only a foot of wood been left at each annual pruning, in the earlier stages of growth, the limbs would have been sufficiently large and strong to hold the present burden of fruit. Fruit growers, especially the inexperienced, are so much in a hurry to get large quantities of fruit, that they spare too much wood upon the young tree. When bearing begins, too much fruit is left upon the limbs, and they become permanently drooping. This superinduces excessive fruitfulness and premature decay. The first eight years of the life of a fruit tree are the most important, and require judicious management. If a good compact head is formed in this period, it will need comparatively little pruning after that. The wood is of the first consequence in these years, and the fruit should be steadily sacrificed for the future good of the tree. Apply the knife above, and the compost below, and keep the heads as much in a pyramidal shape as possible. In due time, you will have abundant fruit, and limbs stout enough to hold it.—*American Agriculturist.*

Aversions of Trees.

In our grounds, a Scotch Pine, sixteen feet high, stood for many years near a Linden, yet seemed to dislike its company. The two trees were placed side by side in childhood, they wintered and summered together ten years, and it would seem that their long acquaintance should have ripened into an attachment for each other. But not so. The Linden did surely seem inclined to do his part. He flaunted his amorous leaves towards the Pine, and regaled him each Summer with an abundance of sweet-smelling flowers, but the Scotchman leaned away from the bold Yankee, as if in disdain at his forwardness. Yet he needn't have been so very squeamish, for there continued to be several feet of distance between the foliage of one and the other.

After witnessing this aversion for several years, we took away the troublesome bass-wood, and left the pine to the society of its own thoughts. The strength of its dislike is now more manifest than before. The branches on the side of the pine toward the bass-wood, are small and inverted and crooked, and the central trunk is drawn quite away from its natural perpendicularity. We have tried to straighten up the tree, but it can be held there only by strong ropes, and even then, the tree is much deformed.

The grounds of a neighbor show a similar instance, though there, the quarrel is between a linden and an apple-tree. The apple-tree grows vigorously, yet it shoots its limbs right off at a large angle, leaving a space of five or six feet between it and the bass-wood. And not far away is a like case between an oak and a cherry. The cherry is much the larger, and the oak, instead of throwing out its branches symmetrically on every side, sends those from the side toward the cherry around to the other, where they grow quite vigorously. But the tree is one-sided, and bends over in one direction like a willow. There is a distance of several feet between the two trees.

Now, why this apparent aversion? Some trees grow up together in quite a loving way, twining their branches one with the other, and making one symmetrical globe of foliage, as if they grew from the same root. And when we see the opposite of this, it seems as though there were some sort of antipathy between them. Do the leaves of some trees emit a gas or gases offensive to others? Or do some suffer from want of abundant light, if they are at all overshadowed by neighbors? Doubtless the latter is the best explanation. And let us learn this lesson, that if we wish to make sure of large, symmetrical, well-developed tops to our trees, we must plant them far enough apart to allow abundant and free growth on every side.

Another Talk at the Gate.

BRIGHT ON GRAPE CULTURE—PRUNING—PATENT FERTILIZERS, ETC.

Gardener.—Good morning, neighbor John. Glad to see you, so bright and early; sit down here on my new rustic seat.

John.—Good morning to you, Sir. This plan of making a covered seat at one's gateway, is a good one; it looks hospitable; it's a grand place for loiterers like me to stop and gossip. You must have got it from the *American Agriculturist* which has given so many things of this kind. Pray, how did you make it?

Gardener.—Easy enough. I first set these rough cedar posts at the corners, then sprang an arch of cedar poles overhead, and wove in diamond-work of smaller branches between the posts and poles. For brackets and other ornamental work, I used wild grape vines. Then, I made these open-work seats beneath. This American Ivy on one side, and that Isabella Grape on the other, having been growing here two years before, I had nothing to do but to twine them over my arbor, and the work was done.

John.—And well done. I must have one like it in my own grounds, some day. But Sir, I wanted to talk with you about Mr. Bright's new book on grape culture. What do you think of it?

Gardener.—I have just finished reading it, and I like it, and yet don't like it. His method is so simple that any body can understand and practice it. It is systematic; the work of pruning and training is reduced to a few plain rules, with no hap-hazard about it, and that is a good thing. And I like it because it enables one to keep the vine under control, both in Winter and Summer.

John.—I confess I have got tired of reaching and stretching up to my old fashioned trellis bars, seven and eight feet high, to prune and train my vines. And then, in following some of the common rules for training, I often find myself bothered and perplexed. The buds won't start where I want them to, and where, according to the system, they ought to start; and then again they push out with double vigor just where I don't want them at all.

Gardener.—Very true, but then I don't feel prepared, as yet, to adopt this man's theory in reference to dwarfing the vine, and growing the fruit on one short cane. Let us see exactly what he says: I have got his book here, under the seat: On page 6, he says: "My system is in the main, a method of fruiting the vine on a single, short cane, with very short lateral branches—growing new wood from the main stem one year, and fruiting it the next; dwarfing the vine by a definite rule of stopping and pruning, and renewing the entire wood of the vine (except a small portion of the main stem,) every other year." Now, I question whether it will answer to cut down our rampant growing vines in this barbarous way, and confine them to a stake not much longer than this spade. Go out into our forests, and see what the natural habits of the grape-vine are, clambering up over the tops of trees sixty or seventy feet high; and yet this writer says, to get healthy vines and fruit, we must allow only one cane to grow from the root, must stub that cane down every other year, to within a few inches of the ground, and, as a general rule, never let it grow higher than four or six feet!

John.—Don't get excited. This is only a *theory* of his, he has not tried it long enough yet, to pronounce upon its practical working for a series of years. He began his experiments, he says, in the year 1858, and then published his book in 1859 in advocacy of the system as better than all others! Rather fast, we sober and modest people would say. But perhaps he thought he had hit upon something really valuable, and if so, the sooner the world heard of it, the better.

Gardener.—Well, we ought to be charitable. But I must doubt the expediency of cutting down the vine so often and so severely as he recommends. Of course, it must be pruned somewhat every year, to keep it within bounds, and to get handsome fruit, but why distort and mutilate it more than is necessary? This wholesale butchery must keep the plant in a state of constant excitement, which will soon show its effects in destroying the vitality of the plant.

Mr. Bright claims *originality* for his method. Yet, I don't see as there is much of that to boast of. According to the German method practised at the West, one cane of a vine is trained up to a stake for fruiting the present year, while another is growing, to fruit the next year; the original cane being cut out at the Winter pruning. (Sometimes, two canes bear fruit while two others are growing.) The only difference between the two systems is, that in one case, the whole plant bears fruit one year and grows a cane the next; and in the other, the plant bears fruit on one cane, and grows a new cane at the same time. If the roots are allowed room enough, I do not see why the German system is not just as philosophical as Mr. Bright's: indeed, there is no radical difference between them.

John.—Is it not believed by some, that the frequent attacks of blight in European vineyards and in our vineyards at the West, is owing partly to the practice of close pruning? And if so, I should think that Mr. Bright's plan of lopping still more severely, would work much greater mischief.

Gardener.—Just so. In some parts of Europe, the vineyards have to be renewed frequently. And Mr. Bright himself seems to expect that his method will shorten the lives of his vines, and he proposes to renew them by layering when they fail. But when we consider that the vine is naturally very long-lived—witness the famous Black Hamburg at Hampton Court, England, over 200 years old, and bearing annually a tun of grapes—then how unnatural and cruel the system which would hack down a plant so terribly, that it must necessarily die in a few years! Suppose we should treat any other fruit-bearing plant so, would it prosper long? Take an apple or pear tree: compel it to make only one long central branch in a season, fruit it (if such a thing were possible) the alternate year, then saw it off within a foot of the ground, train up another central branch to be fruited the next year, and so on from year to year, what would be the result? It would grow weaker and weaker, and finally dwindle down to a mere stump, with a few watery, mildewed branches near the ground. And if the grape-vine, being more tenacious of life, don't give out quite so soon, is it because the treatment is natural and proper?

John.—Now, I verily believe we are pruning Mr. Bright as mercilessly as he would do our vines; still, as he has set himself up as an author and teacher, he must expect criticisms. Let us, however, be good natured. What do you think of his notions about shallow planting?

Gardener.—There is some sense in them as applied to trees, especially evergreens, but as to the grape, I'm in doubt. The vine loves to send down some of its roots quite deep; it wants moisture in the dog-days. Not long ago, I read that European vine-growers are becoming more and more convinced of the importance of deep trenching, to allow the vine-roots to ramble below as deep as they please. In such soils they suffer less from sudden changes of the weather.

John.—I don't think we can quarrel much with his plan of *shallow* culture, since he recommends plowing and subsoiling at least eighteen inches deep, and has "no objection to the application of an abundance of well decomposed sod or peat compost, made with one fourth part of stable manure, and some leaf mold and bone-dust." Nor can I object much to what he says about the propagation of grapes, or their culture in pots in glass houses. Some things which he recommends are yet a matter of experiment; but I hope they will turn out well.

Gardener.—But I have been expecting you would bring your sharp knife down upon his Patent Grape Fertilizer, spoken of on page 81, and onward.

John.—I don't want to say any thing about it, and am sorry Mr. Bright has said any thing about it. It has done more than anything else to prejudice the public against him and his system. Read this: "The Grape Fertilizer contains ammonia, phosphoric acid, potash, salts of lime, and soda, iron, etc., etc., all the inorganic elements of vine and fruit, in proper combination with vegetable acids, especially the tartaric acid." And then, that advertisement at the close of the book is enough to spoil the whole: "Bright's Grape Fertilizer is sold in casks or bags, at $45 per ton, or 2¼ cents per pound by the single bag. City Depot for the Fertilizer at" etc., etc. What a blunder! For his own sake, I hope he will drop the Fertilizer out of the next edition of his book.

But I have talked too long, this morning, and must hasten back to my work. Good bye!

More Curious Superstitions.

Before scientific investigation had made known the actual properties of *plants*, the most whimsical fancies were received and firmly believed in. Thus, every plant was supposed to be under the influence of a planet; each planet reigned paramount over a certain part of the human frame, and the herbs under its influence were believed to supply the proper medicine for that portion of the body. Another method of detecting the virtues of plants was by "signature," and was founded on the idea that "nature has stamped on divers plants legible characters, to discover their uses. So yellow flowers were held the natural medicine for yellow jaundice; spotted herbs for the removal of freckles; and the tooth-like shape of the henbane seed was sufficient proof that its juice would cure the toothache. The medicinal properties attached to some plants by the herbalist are indeed astonishing. "Eye-bright" wine will not only enable old people to read without spectacles, but has been known to restore sight to the blind; valerian juice draws iron or wood out of flesh; cowslip water restores beauty; and a single spoonful of the juice of the mallow is a preservative forever from all diseases! Rue renders a man subtile, quick, and inventive; sage strengthens the memory, and rejoices in so many virtues, that one of its panegyrists asks, "How is it that one who grows sage in his garden can ever die?"

Some curious recipes are furnished by these old herbalists. There is one—never in much demand, we opine—"good against merrie gals," and another "to kill a man in such a sort as though he seemed to die laughing." Two walnuts, two figs, and twenty leaves of rue, beaten together and eaten fasting, would preserve against plague or poison for a day. Dogs, we are told, take grass as an emetic; asses, when afflicted with melancholy, recover their spirits by eating milk waste; wild goats expel arrows from their flesh by eating dittany; serpents clear their eyes with fennel. Adder's-tongue, put in the left ear of a horse, will make him fall down as if dead; but on its removal, he will become livelier than ever; while if asses feed much on hemlock, they will fall so fast asleep, that "some, thinking them to be dead indeed, have flayed off their skins; yet after they have done operating, the beasts have stirred and waked out of their sleep, to the grief and amazement of their owners, and the laughter of others." Mandrake, "that procureth love, in poisonous filters mixed," bore a fearful reputation. It was said to spring up under the gibbet, from the blood of the malefactors; to resemble the human form in shape; and not only shriek when pulled out of the ground, but punish any man attempting to remove it with madness or death, so that it was customary to employ dogs for that purpose.

WORTHY OF IMITATION.—The Southern Cayuga Union Agricultural Society have offered prizes of $5, $2, and a diploma, for the greatest number of shade and ornamental trees to be set out in the Fall of 1860 and Spring of 1861, which shall be alive on the 1st of September, 1861.

Grafting Old Trees—Cutting out the Curculio.

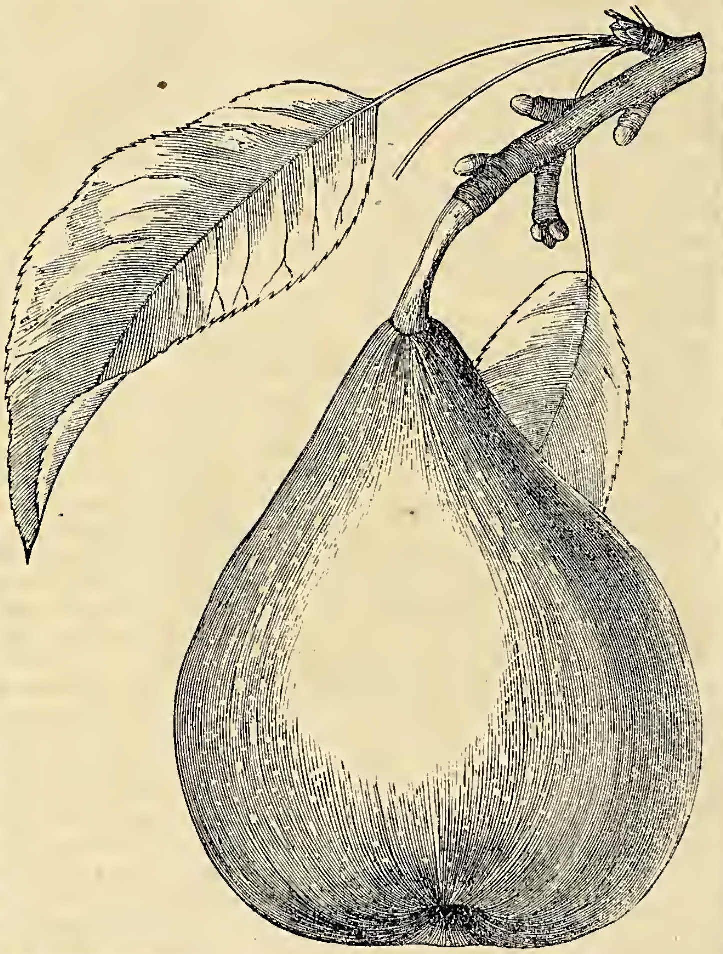
We received a few weeks since from Mr. D. Munson, a box containing fine specimens of Bartlett pears, the product of an old tree, 30 to 40 feet high, recently "made over" by grafting the limbs with this kingly fruit. If all were aware how easy it is thus to replace the hard, no-flavored, and almost worthless pears, that are yielded abundantly by large and healthy trees on many farms, the practice would become general, and good fruit would be less scarce

In the same parcel were packed specimens of the Green Gage plum, showing the result of Mr. Munson's experiments in cutting out the curculio. Shortly after the insect had operated upon the fruit, depositing an egg in supposed safety, Mr. M. examined the trees, and wherever the small puncture appeared on a plum, it was cut out with a sharp knife. The crop ripened with scarcely any loss. The mark made by the cutting is quite plain, but the fruit is otherwise uninjured. This process is effectual, and if persevered in, would, in a few years, greatly diminish the numbers of this insect. It appears rather slow and tedious, but Mr. M. states that the whole time spent upon four trees did not exceed two hours, a trifle in view of the fine results.

Beurre Giffard Pear.

We alluded last month to this really fine, early pear, then ripe, (August 7). The accompanying engraving is a very good representation of the fruit which is thus described by Downing. "Rather above medium in size; pyriform or turbinate, tapering to the stem, which is rather long and obliquely set; skin greenish-yellow, marbled with red on the sunny side; calyx closed, segments stiff, set in a very small basin. Flesh white, melting, juicy, with an excellent vinous flavor, delightfully perfumed. An early pear of great promise—ripening middle of August."

This pear originated in France, and has been fruited in this country about ten years, but is comparatively little known excepting among amateur fruit growers and nurserymen. We unhesitatingly pronounce it one of the very best early pears, succeeding well, both on the pear and quince stocks. At the last meeting of the American Pomological society it was advanced from "promising well" to "*worthy of general cultivation*," which we fully endorse. Owing to a somewhat slow and slender growth, planters have often been disappointed with it until it came into bearing, when full crops of such fair luscious fruit could not fail to please. The form of the tree, the peculiar slender and straggling growth of the branches, red color of the bark, and small leaves with slender stalks, are characteristics by which this variety may easily be known, even before fruiting. In addition to the description given by Downing, it may be noted, that the fruit is often much dotted with dark carmine, and has handsome reddish stripes upon the side next the sun. As with all other fruits, some of its minor characteristics will vary considerably in different localities, according to soil, climate, etc. Like most Summer varieties, the fruit is better when plucked just before ripe, and matured on the shelves.



Grapes from Seed—Sour Krout.

To the Editor of the American Agriculturist.

The raising of grape vines from seeds was a favorite idea with me years ago while I lived in Germany, and I convinced myself by experience, that such plants are hardier and healthier than those propagated from cuttings. There is also another advantage in this method; new varieties of vines can thereby be originated, the fruits of which will, in some instances, be superior to those already known. My process is as follows: In the Fall, select the handsomest and ripest grapes, hang them up in an airy place until they are thoroughly dried. Then rub the kernels out of the berries, and plant them in a bed of fine, rich earth, say one inch deep. The planting can also be delayed until about the first of March. When the warm weather of May sets in, the young vines appear with round, bright leaflets like Basilicum. The following leaves assume the regular form of grape foliage.

I found by a rather singular experiment that the germinating power of the grape seed is not destroyed by fermentation of the surrounding pulp. In the Fall of 1859 I pickled cabbages in the following manner. I placed upon the bottom of a barrel a layer of grape husks and seeds after the juice had been expressed, to the depth of two inches, upon these a layer of cabbages, then husks, and so on alternately until the barrel was filled. I then poured in water until the uppermost layer of husks was soaked, and covered it all with heavy stones. In eight or ten days, fermentation was actively going on, and in a few weeks the cabbage had received the finest flavor. No salt, and nothing but the husks and water were added. The cabbage kept very well until the last of June, and the fine winey flavor of the cabbage proved that it had undergone the vinous fermentation. One would have supposed the grape kernels, exposed to such a process, would have lost their germinating power, but it proved otherwise. The husks were thrown out in March, without any thought of the matter, and in four or five weeks, I discovered there a great number of young grape vines springing up. Many of them were destroyed by incautious spading, but those which remained, continued to grow vigorously, and by the first of July attained a hight of six to eight inches. In experiments with dried grapes, previous to this, it required a much longer time for germinating. It seems probable that fermentation had loosened the skin of the seeds, without injuring the germ. JOHN BECKER.

Vanderburgh Co., Ind.

To Keep Grapes Fresh in Winter.

As many persons fail in keeping grapes through the Winter, we will briefly state the conditions of success in the experiment.

Grapes must be kept cool. Heat, and especially alternations of heat and cold, will promote decay. Let the grapes be kept in as cold a place as possible without freezing; and indeed a degree or two of frost will not hurt them, if they thaw out very slowly.

They should be kept dry. Heat and moisture are the two great agents in producing decomposition. There are very few cellars which are dry enough for grapes. A chamber or retired closet is a better place. Yet, if the house is warmed by a furnace, or even by coal-stoves, the air will probably be made so very dry in the chambers, that the grapes will shrivel up and nearly spoil. Let this be guarded against.

In gathering grapes, wait until they are fully ripe; then make sure of a fine, dry day, and pick the clusters during the middle of the day—say between nine o'clock and four. Carry them in baskets to a cool, airy chamber, and spread them on the floor. Pick them over carefully, culling out all bruised, unripe or defective berries, and let them stand in baskets holding about half a bushel, for a week or ten days. In this time, they will have gone through "the sweating process," and may then be packed down for Winter.

In packing, various methods are employed, and there does not seem to be much choice between them. A very good way is this: Take boxes holding a peck or half a bushel, place a layer of cotton batting at the bottom, then a layer of grapes, then layers of cotton and grapes alternately, until the box is filled. To prevent the clusters pressing too heavily on each other, some practice putting a wad of cotton between them. When the box is full, put on the cover and set it away in a cold place.

Some persons use champagne baskets for packing in, arguing that the circulation of air through the meshes of the basket favors the preservation of the fruit. Others again paste paper on the inside of their boxes, and when the boxes are filled, nail on the cover and paste paper over the whole, to keep out all air! We will not undertake to pronounce upon either of these methods, for we know that grapes keep well in both, provided they are kept where they are neither too hot or cold, neither too moist or too dry.

A friend of ours keeps his grapes in a garret, where the mercury often falls to 20° above zero. But when a very cold snap approaches, he throws a heavy coverlet or two over his boxes, and they get no harm At any day, from November to April, he can entertain his guests with the plumpest and freshest of grapes. With him, the Isabella is the best keeper; the Diana next best.

[American Agriculturist.

Reports Wanted on the Newer Grapes.

As the present month is the great season for ripening and eating grapes, we wish to beg our fruit-growing readers to take special pains in making particular notes on the newer varieties

1. Take note as to earliness. Assuming the well-known Isabella for a standard, observe first, the comparative earliness in ripening of the new sorts. For instance, some tell us that the Delaware ripens a month before the Isabella; others only a fortnight. Some nurserymen who have the Anna for sale, say that it ripens "quite as early as the Diana," and "about a week earlier than the Isabella;" whereas, in the published Report of a certain Pennsylvania Horticultural Society last October, it was said that "the Annas exhibited, were not ripe enough to enable one to form an opinion about them, though Isabellas were fully mature and excellent." Where is the exact truth here? So again, of the Logan, Maxatawny, Taylor, To Kalon and others. This is a very important question. For, let the grape be of the very finest quality, yet if it will not ripen at least as early as the Isabella, it is of no comparative value north of latitude 42° or 43°.

2. As to quality. Here also, opinions differ, though not so widely as in reference to earliness. Nor is it so easy a matter to form a correct opinion. Some persons' tastes have not been cultivated, so as to discriminate nicely in such matters; others again are prejudiced in favor of seedlings of their own raising, or of varieties which they or their friends have on sale. Some sorts are eaten when only half ripe, or when over-ripe, and of course an unsatisfactory opinion is formed. The first two reasons help to show how it happens that some persons insist upon it, that such grapes as the Northern Muscadine (a seedling of the Shakers,) and the Massachusetts White, a tough, musk-scented wilding from the woods of the Bay State, are really first-class table grapes!

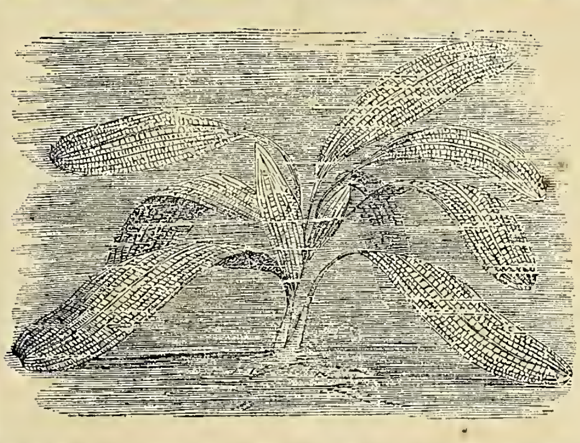
Good judges, we believe, are now about agreed in placing the Delaware, Diana and Rebecca on nearly the same footing as to quality. The To Kalon, Concord, and Hartford Prolific rank next. These having their relative places assigned them, we want to know where to place several other competitors. Is the Logan equal to the Isabella? Somewhat doubtful, but let us find out. The Taylor or Bullitt, Allen's Hybrid, Cuyahoga, Wilmington, the several hybrids of Mr. Rogers of Salem, and others—where do they stand as to quality? Out of all these new comers, something of real excellence must surely appear. And the more closely they are scrutinized at first, by competent judges, the better it will be for all concerned.

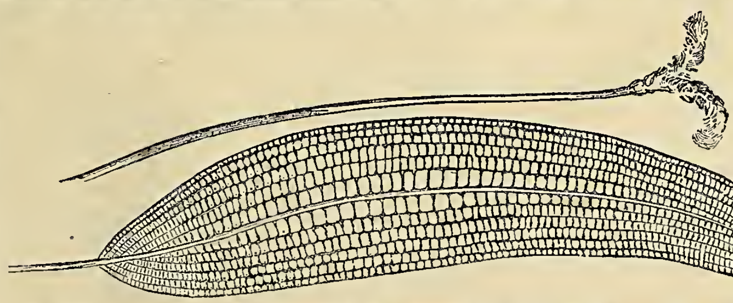
3. As to hardiness. This is important, though less so than the points already enumerated. For, if we can get a new grape, of first quality and early in maturing we can easily protect it in Winter, if it happens to be tender. Still, if it is hardy, it will be all the better for a wider region.

Now, will some of our fruit tasting committees, and others of our readers who feel interested in grape culture, please to taste and to observe carefully for us, and send their opinions to the *American Agriculturist?* We will use the notes they send, impartially and for the public good.

The Lace Leaf Plant—(*Ouvirandra fenestralis*)

The illustration below, drawn from a living specimen, represents a very curious and beautiful plant found in the island of Madagascar, from which place it was taken to England by Mr. W. Ellis. It is an aquatic plant, growing under the water, except the flower stalk, which rises above the surface. Sir W. J. Hooker says of it: "The leaf shown, seems like a living, fibrous skeleton, rather than a perfect leaf. The longitudinal fibers, or nerves, surrounded by a portion of parenchyma (leaf-tissue), extend in curved lines along its entire length, and are united by thread-like nerves, or nervelets, crossing them at right angles from side to side, at short distances from each other. (This structure is shown very plainly at fig. 2.) The color is bright green, and the whole leaf looks as if composed of fine tendrils, wrought after a most regular pattern, so as to resemble a piece of bright green lace or needlework. Each leaf rises from the crown on the root, like a short, delicate, pale green or yellow fiber, gradually uncovering its feathery sides, and increasing in size as it spreads beneath the water. It is scarcely possible to imagine any object of the kind more curious and attractive than a full-grown plant, with its dark green leaves, forming a circle two or three feet in diameter, exhibiting leaves in every state of development, as regards brightness, color, and size."





The upper part of fig. 2 represents the flower stem, and exhibits the curious form of the inflorescence. It resembles a plume or double feather, and is singularly graceful in appearance.

The plant grows in the lowest and hottest part of the country, in the level parts of streams from the mountains. It is found at a depth of from a foot to three feet or more, and it is a singular fact, that however shallow the water may be, the leaves are always beneath the surface, while, whatever may be the depth of the stream, the flower stalk always rises above the surface, and the bloom is developed, and the seed ripened, under the influence of sun and air. It would form a splendid addition to an aquarium, the only difficulty being to keep the temperature at the right point, as it seems to thrive best at 80 degrees Fahrenheit. It was introduced into England in 1855, and a few specimens have been brought to this country. It will undoubtedly become a favorite with amateurs, when it has been sufficiently propagated to be attainable.

Splendid Show of Asters,

AT THE NEW OFFICE OF THE AMERICAN AGRICULTURIST.

A leading object in the selection of our new location was to secure spacious and appropriate rooms where might be conveniently exhibited, for all to look at, the various productions of the field, orchard, and fruit and flower garden. Fortunately, at the very opening of our rooms, we were able to show the finest collections of beautiful ASTERS that have ever been gathered in this country—perhaps the finest in the world. Among the *thousands* who have called in to see them, was a distinguished German florist, who says that even in Germany itself—the home of the improved Asters—he never saw so good a collection. The show consisted of **138** of the best varieties that could be collected in Germany, France, and England—including 20of Truffaut's best French Asters; 5 crowned, or two colored; 5 English quilled; 4 new Giant Emperor; 4 chrysanthemum flowered; Perfection, in seventeen colors; 15 Ranunculus flowering; 3 Hedge-hog; 5 Turkey; 15 Negley's Giant; 8 very dwarf, or pigmy; 20 globe pœony, and 5 pœony Perfection.

A large proportion of these were as large as the common dahlia, and many who were unable to appreciate their delicate petals and fine colors, insisted that they *were* dahlias. Specimens of the Giant Emperor measured full three inches in diameter, and there were all sizes, from these to the half globe, an inch across. They were of many colors, from dark purple to deep red, rose, pink, lavender, and white, with all the intermediate shades, some flowers being of a single color, others having the different shades delicately blended. Instead of the single ray of the old sorts, the entire center is filled with petals or quills, many of them beautifully tipped. These were assorted from many hundred varieties selected and imported by Mr. John Wesley Jones, of Columbia County, who has grown them the past season. Such full-bloomed flowers yield little seed, but we are glad to say that we have arranged with Mr. Jones to save us all the seed he possibly can for our next Winter's free Seed Distribution, so that next Summer our pleasant exhibition will be in part reproduced in many thousand other localities this country, including the British Provinces.

A Chat about Rats.

Could the census of the rats be taken, it would undoubtedly show that their numbers greatly exceed those of any other stock kept. This too, is in spite of cats, terriers, traps, poison, and all the contrivances with which they are hunted, for by universal consent the rat is voted an outcast, whose life is to be forfeited at sight, provided you can catch him. Other races of animals have almost disappeared under like persecution. To say nothing of larger game—raccoons, black and grey squirrels, the hateful rattlesnake, and copper head, and many minor creatures have long been unknown in the more thickly settled districts. But the rat takes up his bed and board under the very roof of his enemies, he forages boldly in the kitchen and larder, confidently rears his young in the partition adjoining our living rooms, and leads them forth in nightly and right merry gambols through the wainscoting.

This persistence of the race is due principally to two causes. Rats are outrageously prolific. They commence breeding at the age of three months, and bring forth a litter of from eight to fourteen, and even more, five or six times a year! At the ordinary rate of increase, a single pair and their progeny if all should live, would in three years number 650,000. Truly, but for the vigorous crusade continually carried on against them, there would in a few years be nothing left but rats. Another fortunate circumstance—for them—is their easy adaptation to every kind of life. A rat is a true cosmopolitan. He can feast with a lord, or with a peasant. He revels in the tempting luxuries of the pastry-cook, but will with equal gusto feed on a flitch of bacon in the store-room, or a sack of corn in the barn; nor does he hesitate, upon good opportunity, to attack the poultry, the feeble lambs, and in numerous instances even children have been mutilated by these daring marauders. He is not particular as to climate or locality—he nibbles at the fruit in the tropics, and shares the train oil of the Esquimaux. There was no necessity that the progenitors of the existing race should receive special command to seek shelter in the ark; long before its completion, no doubt, they had found snug quarters, and laid in their stock—every sailor will tell you that his berth in the forecastle has been their favorite lurking place.

You will seldom see one of these animals lame or diseased, or in any way infirm. When one is injured by any accident, his companions fall upon him, kill him without mercy, and make a complete finish of the work by eating him. The anxious mother rat has continually to watch, not only against the prowling cat, for the young are favorite morsels with the insatiable male, who frequently feasts upon his own descendants.

Although the veriest coward when alone, and when there is a chance to run, the rat when driven to a corner, or emboldened by numbers of his tribe, is quite a formidable enemy. A cat will hesitate to attack one unless she may take him at a disadvantage by springing upon him unawares; several instances have occurred of an attack upon persons by a horde of rats, from whom escape was made with difficulty; and it is related of a poor pie baker in London, that having missed a quantity of his pastry, he one night set himself to watch for the thief, and was overpowered and partially devoured by them.

The tools of the rat, which also serve as formidable weapons, are four long sharp teeth, two in the front of the upper, and two in the lower jaw. These are set like wedges, the outer part is covered with hard enamel, the inner is a softer, bony composition. This softer part is worn away in gnawing, which gives a sharp cutting edge to the front, with which the animal can readily make his way through the hardest wood. Indeed, he must keep gnawing from necessity; for the teeth grow so rapidly, that if unemployed, they would soon protrude far beyond the mouth, and become useless. A rat was caught, which had lost one of his upper teeth, and the lower one had continued to grow until it formed a curved tusk reaching over to the side of his ear, and threatened to pierce his head.

Until within a few years, excepting among the Chinese and a few other Eastern nations, the rat has been turned to no account. Some genius at length discovered that the skin of the rat could be tanned into a very pliable and fine leather, little inferior to kid, since which, the skins have in Paris, and London also we believe, a regular market value; and the capture of these animals has been quite a profitable business for that class of inhabitants who are not above descending to the sewers and other *ratty* places in pursuit of a livelihood. We might include also in the profits of the ratting business, the sales made to "fancy men" who purchase large numbers for training dogs, particularly the terrier, to destroy them—not so much with a view to exterminating the species, as to afford "sport" to the *roughs* that gather around the rat pits and bet upon the rat-destroying powers of their favorite dogs.

The usual methods of keeping these vermin within bounds, are too well known to need description. We can hardly hope to be entirely rid of them, but a faithful cat kept in the house, and two or more at the barn, will usually make the quarters too unsafe to allow any great increase. Without some check, they will make serious inroads upon the grain mows and bins of the farmer, and prove a terrible annoyance to the careful housekeeper.

For the American Agriculturist.

About Corned Beef.

Corned beef, properly salted, and cooked as it should be, is a dish fit for the sovereign people; but to eat salt junk, such as too often exercises the muscles of the jaws, is a pennance even for a malefactor. Most of the beef put up for Winter use, is spoiled by the use of too much salt, which destroys the flavor, and makes the meat stringy and tough. When beef is fresh, it contains considerable blood, which is drawn out by the brine. If the meat is left in this bloody mixture, it will require a much larger quantity of salt to preserve it, particularly through warm weather. My plan is to make a brine by using for every hundred pounds of beef, 5 lbs. salt, ¼ oz. saltpeter, and 1 lb. brown sugar. This is dissolved in just enough water to cover the meat, and poured upon it. When it has been in this brine two weeks, I take out the meat, let it drain, pour a fresh brine over it, and then it will be good, the season through.

The cook who uses corned beef, should not be so ignorant or so indolent as to delay putting it over the fire until an hour before dinner. A good sized piece requires three or four hours steady boiling to do it justice. Insufficient boiling must be made up for by extra chewing. Always have the water boiling when the meat is dropped in; otherwise the sweetness will all be drawn out into the water. A boiling heat hardens the outer surface at once, and thus keeps in the juices which give richness, and which contain most of the nourishment. An excellent way of cooking corned beef is, to have a large boiler, with a wire, or wooden rack on the bottom, for the meat to rest on, over the water. When the water boils, place the meat upon the rack, and put on the cover of the boiler, with a cloth over it to keep in the steam. The heat of the steam will rise above the boiling point, and penetrate the meat, and cook it more quickly and better than could be done by boiling. MARTHA.

Frames for Drying Apples.

To the Editor of the American Agriculturist.

I constructed some trays for drying apples, last season, which I like so well that I send you a description of them. They are cheap, easily made, convenient in handling, and efficient.

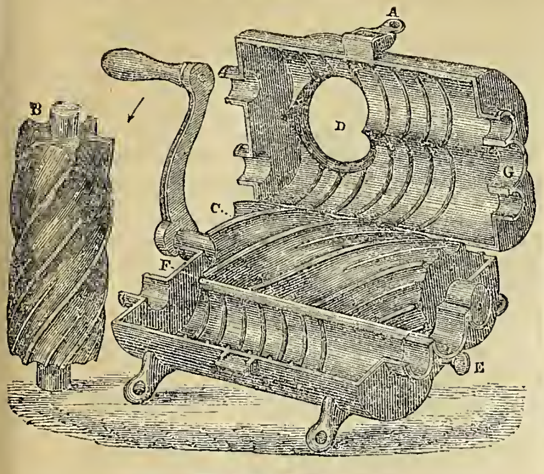
They are made wholly of laths, the ends being a thick lath sawed in two, and the sides strong whole laths. For the bottom, nail whole laths longitudinally, or half laths across. If whole laths are nailed lengthwise, they will need a cross support in the middle, which can be nailed on afterwards. As the apples, after coring or slicing, are to be spread thinly upon these laths, the weight will be light. One man can easily handle a frame, or two men can carry eight or ten, set upon each other. They may be placed in any convenient situation for drying, but I find two rails set upon benches, in the open sun, a very suitable place. A gentle shaking, or stirring by hand occasionally, will facilitate the drying.

Westchester Co., N. Y. A. E. LATILLA.

REMARKS.—We have used similar contrivances for drying the different fruits. Large frames, made of thin board slats, were constructed for apples, pears, peaches, pumpkins, string beans, etc., to be used out of doors, and smaller ones for setting upon each other, were put in a moderately heated oven to continue or hasten the drying process during cloudy or rainy weather. In making the lath frames of our correspondent, we should prefer thin *board* sides and ends, which would hold the nails much better than the very narrow edge of a lath.

Save the Fruit.

In nearly every section of the country there is a great apple crop. Peaches abound also in a few places, but not in New-Jersey, and some other localities where the yield was formerly abundant. The excess of fruit should not be wasted. There are millions of people in our cities and villages, and in newer sections where fruit trees are not yet planted, who will gladly pay good prices for dried apples and peaches—if well preserved. We can not do better than to repeat our former advice: It pays well and pays best to prepare and dry fruit CAREFULLY. Clean, well pared, well cored, and carefully dried apples, sell for double the price of those poorly prepared. Two shillings worth of time and care in preparing a bushel will not unfrequently add a dollar or more to its marketable value. Apples may be quickly dried by shaving them wholly into thin parings, and spreading them upon plates or earthenware dishes to dry. "Apple leather," as it is sometimes called, is a convenient article. It is made by preparing the fruit as if for sauce, and then, after cooking, spreading it thinly on earthen dishes and drying it in the hot sun, or in ovens kept at so low a temperature as to avoid all danger of scorching. The thin dried sheets thus prepared will keep a long time in a dry room, and be ready for use whenever they are wanted, by simply soaking them. Peaches may also be preserved in a similar manner.



Hale's Meat Cutter.

The accompanying sketch represents, rather indistinctly, an improved implement for cutting sausage meat, mince meat, hash, etc., which we have put to practical test the past month, and found quite effective. It consists essentially of a double box as shown in the engraving. in which are two cylinders, *B*, *B*, having spiral cutting flanges, which work against a horizontal knife, *E*, *F*. These cylinders are placed in, the cover shut down, and fastened with a simple catch, and the meat is then put in through the opening, *D*. The spiral flanges catch it and draw it over the knife placed between them, and force it along towards the opening in the opposite end. The special advantages claimed for this implement are, that it cuts the meat without tearing it, that the parts are few and easily removed so that it can be readily cleaned, though used daily for making small quantities of hash or mince-meat; that the knife is kept constantly sharp by the action of the rollers; that the meat as fast as cut is forced out directly into sausage cases when desired, etc. It is, on the whole, we think, superior to any other form of implement of the kind, and certainly gives a more expeditious means of cutting meat, than the old fashioned one-bladed chopping knife. It is sold at a low price—the smaller sizes, which are large enough for ordinary family use, being retailed at $2½ to $3.

Pickling Onions.

A correspondent writes: "Do all of the lady readers of the *American Agriculturist* know what fine pickles may be made of small onions? Any variety will do, but the white or silver-skinned are the nicest. I use those from the size of a large pea to an inch or more in diameter, but prefer those about as large as a hickory-nut. I peel off the outer dark skin, and lay them in salt and water for from six to ten days, according to the size, pouring off the brine and adding new every day. They are then put into a vessel, and scalding brine poured on, and covered up until cool, when one more similar scalding is given. This cooks them just enough. Then place them in jars, cover with vinegar, and set away. The soaking in salt water removes the strong flavor, and after standing in the vinegar they are very fine, and will keep a long time. For variety, I put into a jar or two, ginger root, mace, cloves, etc. The friend who taught me this process, advised to pour in a little olive oil to float on the top of the vinegar in the jars when set away. This may help to keep mold off from the vinegar, but not liking the flavor of salad oil I have not tried "

Hints on Cooking, etc.

The following three recipes were contributed to the *Agriculturist* by "A Reader."

Mountain Gingerbread.—1 lb. flour, 1 lb. sugar, 1 lb. butter, 4 eggs, 1 lb. raisins, stoned. Ginger, allspice, and cinnamon to suit.

Brentford Rolls.—2 lbs. flour, 4 oz. butter, 2 eggs, well beaten, 2 spoonfuls of yeast, about a pint of milk. Make a soft dough and set it to rise. When light, make it into small rolls, and bake about 20 minutes.

Egg Plants.—Put them into a pot, with plenty of water, and simmer them until quite tender. Take them out, pull off the skin, and mash them smooth. Mix with them some grated bread crumbs, powdered sweet marjoram, large piece of butter, and a few *pounded* cloves. Grate a layer of bread over the top, and put the dish into the oven and brown it.

The Editor with his Young Readers.

"HAZING"—REAL FUN.

Our younger readers may not know the meaning of the word "hazing," and we will explain it. When boys or young men go to college, they first spend one year in what is called the "Freshman Class"—the class of *fresh* boys or men. The next year they go into the "Sophomore Class"—or wise-fool class, (Sophos means *wise*, and moros means a *fool*. This class is so called, we suppose, because when boys have been in college one year, they feel very important, and think themselves very wise, while they are comparatively far from being wise yet.) The next year is spent in the Junior Class; and the fourth year in the Senior Class, or oldest class. Well, all boys and young men love fun and frolic, and it is quite common for the older classes to play all sorts of annoying tricks upon the younger classes, particularly upon the Freshmen. The Sophomores, especially, love to annoy the Freshmen. In some colleges this trick-playing is called "hazing." Sometimes they go into a Freshman's room and smoke him out, sometimes they pour pails of water on his head, or put sulphur in his fire, or blindfold him at night, and lead him into some dark place and leave him, and so on. Dr. Huntington tells of a hazing that was capitally done. The joke was such a good one, that we would like to teach it to boys who do not go to college. We knew of just such sport made of a poor widow lady, and though not much given to hazing, or skylarking, we should like to be counted in among the boys when they attempt just such sport, whether with their fellows, or with some poor old man or woman. Here's the joke that was played: In the college were two poor young men trying to get an education. They cut wood, and did many other services for their wealthy comrades, to get money to pay their way. They were poorly clad, and their room was without a carpet, and destitute of many other comforts usually enjoyed. Some of the fun-loving Sophomores determined to have a joke at the expense of these two young men. So a company of them disguised their faces, and at midnight marched into the room, and wrapping them up in their bed blankets, they carried them into a garret room, where they pretended to initiate them into a secret society. While this was going on, other Sophomores entirely cleared their room, putting out the old bedstead, chairs, table, etc. Then another company brought in a nice new carpet and put it down on the floor; they brought in new chairs, tables, book cases, bedstead, and sundry other things. They each brought in a lot of fuel from their several rooms, and stored it in the closet and built a roaring fire in the grate, and put all things in apple-pie order. The two young men were then brought down, laid in their beds, and the Sophomores fled to their rooms. Was not that glorious sport? Would you not like to have looked through the window and seen the confusion of these young men as they got up and looked around, and examined the number on their door to see whose room it was that they had got into?

SHEEP AND SHIP.

More than half the quarrels between girls, or boys, or men, begin in a misunderstanding. Something is said or done in perfect innocence, which another misunderstands, and thinks an affront was intended. Without asking an explanation, the hasty person answers in anger; this stirs up strife, and a quarrel commences. The following from a California exchange is a good illustration. The writer says: "I happened to be traveling in a stage-coach, where, among half a dozen passengers, there were a Frenchman and an Englishman. There seemed to be a sort of cat-and-dog feeling between them; for if one opened his lips, the other was sure to fly at the observation with the teeth and claws of dispute. As we were driving along, the Englishman spoke of a sheep he had seen in some foreign land, with a tail so long as to drag upon the ground. Thereupon the Frenchman shrugged up his shoulders, curled his lip, lifted his eyebrows, and took a pinch of snuff.

"What do you mean by that?" said the Englishman, not a little nettled at the contemptuous air of his rival.

"Vat do I mean?" said the latter; "I means dat a sheap has not got von tail at all."

"A sheep han't got a tail, ha?" said the Englishman.

"No, not von bit!" said the Frenchman.

"Well, this comes from eating frogs," said John Bull "What can you expect of a man who eats frogs? You say a sheep hasn't got a tail. I tell you, mounseer, a sheep *has* got a tail.

"Pardon, monsieur," said the other, with a polite bow, yet with a very sneering expression; "I say de sheap has no tail, not von bit."

By this time they were greatly excited, and we can not say what might have happened had not one of the passengers asked the Frenchman what he meant by a *sheap?*

"Vat do I means by *sheap?* vy, I means one big larsh thing with sails and rudder, that goes upon the sea."

"Oh, ho," said the Englishman, "you mean a ship."

"Oui, monsieur," was the reply, "I mean one sheap that has de captain and de sailors, and goes on vater."

"Very well, sir," says the Englishman; "I mean a *sheep*, a creature of four legs, covered with wool."

"Ah, you mean von *sheep* vit de vool," said the other "Oui, oui, monsieur; de sheep vit de vool has de tail."

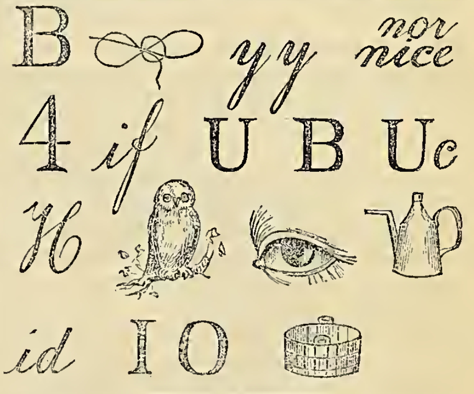
This incident taught me a lesson, and I give it gratis to my readers—if they ever get into controversy, let them consider whether one of the parties does not mean a *ship* and the other a *sheep*.

NEW PROBLEMS.

No. 27. *Enigma*, contributed by "Whitestono."

"I'm a singular creature—pray tell me my name
I partake of my countrymen's glory and fame,
I daily am old, and I daily am new,
I am prais'd, I am blam'd, I am false, I am true,
I'm the talk of the nation, while I'm in my prime,
But forgotten when once I've outlasted my time.
In the morning, no miss is more courted than I,
In the evening, you see me thrown carelessly by
Take warning, ye fair, I, like you, have my day,
But also, you, like me, must grow old and decay."

No. 28. *Illustrated Rebus*, contributed to the *Agriculturist* by the President of a College, who loves children, and reads these columns. It contains a good sentiment.



ANSWERS TO PROBLEMS.

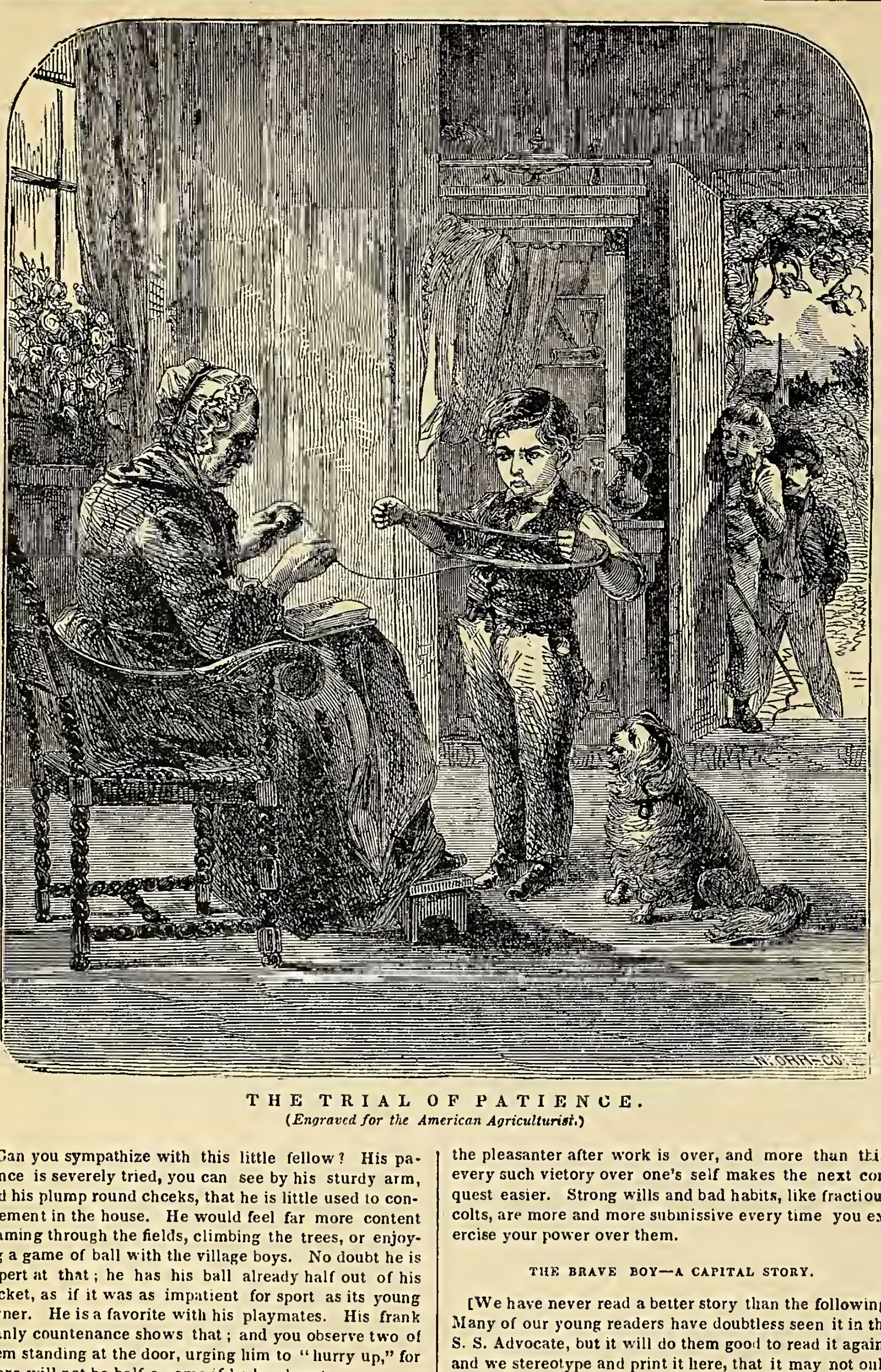
No. 23—Enigma, again.—Quite a number of our readers have written that "something" is not a fair answer to this enigma, published on page 249. Aug. No. Some say "thought" is better, and others find the pronoun "it" to satisfy the conditions of the enigma. Perhaps either of them is as good as the solution already published.

No. 24. *Dot Puzzle.*—We will leave this for you to work at another month, as very few have sent in answers.

No. 25. *String Puzzle.*—With the left hand pass the string through the arm-hole and up over the head, then through the opposite arm-hole, and over the left hand. Now put the hand up underneath the vest and draw the string down around the body until it is below the waist, when it will fall to the floor and you can step out of it.

No. 26—*Enigma.*—The answer is "*Nothing.*"

Correct answers have been received as follows: Jno. Q. Miller, 26; Elvira Hibbard, 22; J E. Danelson, 21; J. T. Endicott, 22; W. H. Eckles, 21; Otway B. McCluire, 21, 22; Wm H. Bliss, 24; W. A. Buckhont, 24, 25; Mahlon M. Walker, 24; Jarvis H. Arnold, 24; Friend Watrous, 25; Andrew Hedglin, 25; E. H. Trafton, 25. Grafton Boy, 25, by taking off his vest.



THE TRIAL OF PATIENCE.
(Engraved for the American Agriculturist.)

Can you sympathize with this little fellow? His patience is severely tried, you can see by his sturdy arm, and his plump round cheeks, that he is little used to confinement in the house. He would feel far more content roaming through the fields, climbing the trees, or enjoying a game of ball with the village boys. No doubt he is expert at that; he has his ball already half out of his pocket, as if it was as impatient for sport as its young owner. He is a favorite with his playmates. His frank manly countenance shows that; and you observe two of them standing at the door, urging him to "hurry up," for there will not be half a game if he be absent.

What a battle he is fighting with himself. He loves his good old grandmother, and is willing to help her, but he loves play too, and how he does wish she would stop reading, and finish winding the yarn. He cannot keep down the expression of impatience; his forehead is a little contracted, and his fists are shut quite tightly, as though he were trying to hold himself in, from saying or doing anything wrong. The old lady is too much interested in her book to see anything of this. It appears to be the Bible that she is reading. You notice the clasps on the cover, they are such as were formerly used to hold the lids more firmly in place. We see them now occasionally; formerly almost all large sized Bibles were bound in this style

That little fellow is a real hero. Most boys would fret or whine, or cry, or perhaps entirely refuse to remain; but he stands to it, hard work though it be. He conquers himself, and that makes a hero of any man or boy. He may not know it now, but some of these days, if he grows up to manhood, and carries out the same spirit, to do right though it cost a sacrifice, he will command the respect and honor of his fellow men. No doubt his grandmother has taught him from the Good Book she is reading, and he can well afford to deny himself a play spell now and then in return for her kindness.

When you have work to do which tries your patience, think of this little hero, and brave it out as he does, no matter how strong the temptation to leave it. Play is all the pleasanter after work is over, and more than this every such victory over one's self makes the next conquest easier. Strong wills and bad habits, like fractious colts, are more and more submissive every time you exercise your power over them.

THE BRAVE BOY—A CAPITAL STORY.

[We have never read a better story than the following. Many of our young readers have doubtless seen it in the S. S. Advocate, but it will do them good to read it again; and we stereotype and print it here, that it may not only be re-read by those who have seen it, but by tens of thousonds who have not done so. Hartley is the boy for us; how many Hartleys are there among *our* boys? We hope the story will greatly increase the number. Ed.]

I shall never forget a lesson which I received when quite a young lad at the Academy in B. Among my schoolfellows were Hartley and Jemson. They were somewhat older than myself, and to Jemson I looked up as a sort of leader in matters of opinion as well as of sport. He was not at heart malicious, but he had a foolish ambition of being thought witty, and he made himself feared by the bad habit of turning things into *ridicule*, and being ever on the look out for matter of derision.

Hartley was a new scholar, and little was known of him among the boys. One morning, as we were on the way to school, he was seen driving a cow along the road toward a neighboring field. A group of boys, among whom was Jemson, met him as he was passing. The opportunity was one not to be lost by Jemson. "Hallo!" he exclaimed, "what's the price of milk? I say, Jonathan, what do you fodder on? What will you take for all the gold on her horns? Boys, if you want to see the latest Paris style, look at those boots!"

Hartley, waving his hand to us with a pleasant smile, and driving the cow to the field, took down the bars of a rail-fence, saw her safely in the inclosure, and then, putting up the bars, came and entered the school with the rest of us. After school, in the afternoon, he let out the cow and drove her off, none of us knew where. And every day for weeks he went through the same task.

The boys of B. Academy were nearly all the sons of wealthy parents, and some of them, among whom was Jemson, were dunces enough to look down with a sort of disdain upon a scholar who had to drive a cow. The sneers and jeers of Jemson were accordingly often renewed. He once, on a plea that he did not like the odor of the barn, refused to sit next to Hartley. Occasionally he would inquire after the cow's health, pronouncing the word "ke-ow," after the manner of some country people.

With admirable good nature did Hartley bear all these silly attempts to wound and annoy him. *I do not remember that he was even once betrayed into a look or word of angry retaliation.* (Good!)

"I suppose, Hartley," said Jemson one day, "your daddy means to make a milkman of you?"

"Why not?" asked Hartley.—"O nothing; only don't leave much water in the cans after you rinse them—that's all!"

The boys laughed, and Hartley, not in the least mortified, replied: "Never fear; if ever I should rise to be a milkman, I'll give good measure and good milk too."

The day after this conversation there was a public examination, at which a number of ladies and gentlemen from the neighboring towns were present. Prizes were awarded by the principal of our academy, and both Hartley and Jemson received a creditable number; for, in respect to scholarship, these two were about equal. After the ceremony of distribution, the principal remarked that there was one prize, consisting of a gold medal, which was rarely awarded, not so much on account of its great cost, as because the instances were rare which rendered its bestowal proper. It was the prize of HEROISM. The last boy who received one, was young Manners, who, three years ago, rescued a blind girl from drowning. The principal then said that, with permission of the company, he would relate a short story.

"Not long since, some scholars were flying a kite in the street just as a poor boy on horseback rode by on his way to the mill. The horse took fright and threw the boy, injuring him so sadly that he was carried home, and confined some weeks to his bed. Of the scholars who had unintentionally caused the disaster, none followed to learn the fate of the wounded boy. There was one scholar, however, who had witnessed the accident from a distance, who not only went to make inquiries, but stayed to render services.

"This scholar soon learned that the wounded boy was the grandson of a poor widow, whose sole support consisted in selling the milk of a fine cow of which she was the owner. Alas! what could she now do? She was old and lame, and her grandson, on whom she depended to drive her cow to the pasture, was on his back helpless.

"'Never mind, good woman,' said the scholar, 'I can drive your cow!'

"With blessings and thanks the old woman accepted his offer. But his kindness did not stop here. Money was wanted to get articles from the apothecary. 'I have money that my mother sent me to buy a pair of boots with, but I can do without them for a while.'

"'O no,' said the old woman, 'I can't consent to that, but here is a pair of heavy boots that I bought for Henry, who can't wear them. If you would only buy these, giving us what they cost, we should get along nicely.'

"The scholar bought the boots, clumsy as they were, and has worn them up to this time.

"Well, when it was discovered by other boys of the academy that our scholar was in the habit of driving a cow, he was assailed every day with laughter and ridicule. His cowhide boots in particular were made matter of mirth. But he kept on cheerfully and bravely, day after day, never shunning observation, driving the widow's cow and wearing his thick boots, contented in the thought that he was *doing right;* caring not for all the jeers and sneers that could be uttered. He never undertook to explain why he drove a cow, for he was not inclined to make a vaunt of his charitable motives, and furthermore, in his heart he had no sympathy with the *false pride* that could look down with ridicule on *any useful employment* It was by mere accident that his course of kindness and self-denial was yesterday discovered by his teacher.

"And now, ladies and gentlemen, I appeal to you, was there not *true heroism* in this boy's conduct? Nay, Master Hartley, do not hide out of sight behind the black board! You are not afraid of ridicule, you must not be afraid of praise. Come forth, come forth, Master Edward James Hartley, and let us see your honest face!"

As Hartley, with blushing cheeks, made his appearance, what a round of applause, in which the whole company joined, spoke the general approbation of his conduct! The ladies stood upon benches and waved their handkerchiefs. The old men wiped the gathering moisture from the corners of their eyes, and clapped their hands. Those clumsy boots on Hartley's feet seemed a prouder ornament than a crown would have been on his head. The medal was bestowed on him amid general acclamation.

Let me tell you a good thing of Jemson before I conclude He was heartily ashamed of his ill-natured raillery, and after we were dismissed, he went with tears of manly self-rebuke in his eyes, and tendered his hand to Hartley, making a handsome apology for his past ill-manners. "Think no more of it, old fellow," said Hartley, "let us all go and have a ramble in the woods before we break up for the vacation." The boys, onc and all, followed Jemson's example, and then we set forth with huzzas into the woods. What a happy day it was!

Boys and girls, never despise another who may be more plainly clad than yourselves. There is many a noble heart under a well-patched garment. Whenever you are tempted to look scornfully upon one in a poor or plain dress, think of Edward James Hartley, the BRAVE BOY, and his GOLD MEDAL.

Capital Opportunity for Young Folks.

Reference was made last month to the fact that many boys and girls have obtained our dictionary and other premiums, and also to the opportunity again open for them and others. We have now another desirable thing to offer, which will meet the wishes of a great number—viz.: a first quality MELODEON. But while we would like to see a multitude of our young readers *each* the happy possessor of one of these instruments, we have another suggestion to make. First let us say, that we place a very high value upon the influence of music in the family, and in the school room. We have traveled many miles with subscription papers, raising funds to buy melodeons for both Sabbath and week-day schools, and never considcred the time and labor misspent; and we now cheerfully dispense with the home use of a fine instrument, because we find it so great a benefit to our Sunday School.

Well, what we proposc is this: Messrs. Geo. A. Prince & Co., have generously offered to supply us with the instruments at such rates that we can offer them for a comparatively small number of subscribers. Now let a few of the enterprising young people connected with the Sabbath or week-day school in every neighborhood, unite their efforts, and get the Postmaster, or a merchant, or some other kind-hearted reliable person to act as treasurer. Then let all take hold and collect as many names of persons as they can, who will take the *Agriculturist* for a year. There are few persons who will not subscribe a dollar, when by so doing they can not only have the paper a year but also aid in securing a good Melodeon for the neighborhood. Some persons will take several copies, and present them to their friends at a distance, or to their less prosperous neighbors.

In a large, thickly populated place, a club might be made up at 80 cents each, but usually it will be about as easy to get them at $1 each, and then a larger instrument can be secured. (Sce premium list). All the instruments are put up in neat rosewood cases, and the cheapest [$45] answer a very good purpose. The higher priced are of course more desirable. A club of 125 secures a $75 instrument, and 250 names will obtain one of the large piano-case $150 melodeons, which is all that could be desired in an instrument of this kind.

Is not this an enterprise worth taking hold of? Will it not be a capital thing to have a good melodeon in every school-room, a copy of the *Agriculturist* in every family; and in addition, a quantity of seeds growing next Summer in every garden in the neighborhood. (We shall distribute free seeds amoung our subscribers as usual, next Winter.) If you think so, young friends, go right to work, before others have occupied your ground with other enterprises. Remember that it costs no more to take the paper from now to the close of 1861, than it will to begin a month, or two, or three later. (See last page.)

For Ten Years!—Having secured positive control of our new premises for *ten years*, our readers will know where to find the office of the *American Agriculturist* for a decade of years, at least—and probably it will remain here as much longer as it continued at the old habitation in Water-st. In this age of traveling, probably nine-tenths of our readers will come to, or pass through the Mctropolitan city—so we shall, of course, have the pleasure of meeting them just where we are now writing this paragraph. Our younger readers—well, they will be mostly grown up men and women, before we move again. Are you each doing all you can now, to be the *right sort* of men and women when you grow up?

Names of Plants.—J. A. Graves, Tioga Co., N. Y. We have heard various pronunciations of Deutzia *gracilis*, and Weigelia *amabalis*, but believe they should be thus: *Doot-ze-ah grassy-liss*, and *Wy-ge-le-ah* (g. hard) *a-mab-e-lis*.

Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from whenever we have room left here.*

Not the Best.—The last month has been a sort of "moving day" with us, and the Publishing Editor has been necessarily so occupied with "fitting up" and "fixing up" the new establishment, as to be unable to devote much attention to editorial matters. So please excuse any defects or want of life and variety in this paper. More help—new men—are coming in to aid us at the beginning of the next volume—and the *Agriculturist* will go ahead with a six-horse-steam-power. By the way, we are to have new type next month, and it is also written down to somewhat change the character of the paper soon—that is to drop a part of the essays, and substitute a much larger variety of agricultural and horticultural news, and interesting items, gathered from all parts of the country.

Our Household Department—A Request. For the reasons given in the previous paragraph, the "household department" has received less attention than its importance demands, and less than we would bestow upon it. We ask all our fair readers to lend us their aid by contributing as many items as possible, which may be of interest to their sister housekeepers, and serve to lighten the labor and care of the kitchen and nursery. Anything new and useful that you have individually learned during the last year, or may learn in the year to come, from any source, will be likely to be new to nine out of ten other persons. So please tell them about it. We want familiar, practical talks on these topics—not "fanciful sketches," nor "fine writing."

Blackberry Seed—How to Plant.—A friend who has been very successful in growing blackberry seed, recommends to plant the seed in Autumn, any time after the gathering, until the ground freezes. Put it on a nice seed bed, covering with scarcely half an inch of a mixture of sand with leaf-mold, or light muck, in equal quantities, so as to allow the tender shoot to break through the light soil readily. The seed will start finely in the Spring, and the plants may be gradually thinned for transplanting as fast as the second leaf is formed.

The New-Rochelle Blackberry.—This magnificent fruit has suffered somewhat by the dry weather the past season, but we have neither seen nor heard anything to indicate that it is not all we have claimed for it in years past. The plants are now abundant and cheap, and those who have not done so, should put out a few the latter part of this month or at any time before freezing weather. The plants are much preferable to the seed whenever they can be got. For distant points we shall probably have a small quantity of the seed to offer in our annual distribution. Even during the past dry season, we have reliable reports of $300 to $500 worth of berries being sold from an acre of three to four-year-old plants. Those planted this Fall, will bear pretty well a year from next Spring.

Best Small Fruits.—"W. H. W." The White Grape Currant is considered the best white variety known, both for flavor and productiveness. Among the Raspberries, Brinklé's Orange, Red Antwerp and Fastolf are general favorites.

Upland Cranberries.—J. S. Bowerman, Barnstahle Co., Mass. The Upland Cranberries you speak of, are only the swamp plants cultivated upon higher ground. Plants are often taken from the dryer portions and sold as "upland." Your own Cape Cod berries are quite as good. For upland culture the "Bell" variety is best, but low ground that can be flooded, is much to be preferred, as insects are usually quite troublesome upon dry lands.

Grapes for Ohio.—Henry Brethauer, Williams Co., O. The Isabella and Catawba are standard grapes in your latitude. We would also plant Diana, Hartford Prolific, Concord, and Delaware, with a few of the Rebecca.

Seedling Grapes.—Mrs. Mary H. Mager, Suffolk Co., N. Y. The specimens sent bear too strong resemblance to wild grapes to be valuable. The hard pulp and musky flavor make them greatly inferior to many sorts already cultivated, and which are equally early.

Potting Verbenas for Winter.—J. Barnard, Chester Co., Pa. Select healthy plants—layers if possible—and take them up just before frost. Have pots and potting soil ready, and arrange gravel in the bottom for drainage; fill nearly to the surface with the prepared earth, set in the plants, water and set in the shade for a few days. A good verbena soil is composed of equal parts of garden soil and leaf mold, or muck, to which a little sand and well rotted manure may be added. Of course but one plant should be set in a pot.

Evergreen Tree Seeds often lie in the ground a whole year before they grow. If seeds of Norway Spruce, or Arbor Vitæ, sent out by us, have failed to come up, leave them undisturbed until another season, when they will be very likely to show themselves. If sown as soon as they are ripe, in the Fall, they are quite certain to vegetate the following Spring.

Removing Trees.—"W. H. W." In the Fall, after the growth of the season is completed and the trees are at rest, is the best time for digging a trench around large trees, and cutting off the large spreading roots. Next Spring there will be a greatly increased growth of fibrous roots, forming a compact mass near the body of the trees. The succeeding Autumn they can be removed with a large ball of earth attached, with little danger.

Sheets for Gathering Fruit.—J. Green, Orange Co., N. Y. We know of none for sale, but you can easily construct one of 8 yards of stout muslin sheeting, 2 yards wide. Cut and sew it to make a square sheet of 12 feet each way. Bind with a small cord, leaving loops at each corner. Set it under one side of the tree, tie the corners to firm stakes standing four feet out of ground, and have a hole in the center to slip a stake through and tie, so that the falling apples will roll toward the outer edges. Pick the apples and drop them upon the cloth. One or two persons can be constantly engaged in sorting out and barreling from the sheet. Fruit can be rapidly gathered in this way, with very little bruising.

Books on Insects.—C. Hoffman, jr., Dauphin Co., Pa. Harris's work is out of print, and only now and then a chance copy can be had at a premium. Fitch's Reports on Insects, in two vols., are on sale in this city, at $1 25 per vol., for which we can send them post paid.

Fruit Books.—B. W. Watson, Strafford Co., N. H. We know of no book exclusively devoted to the small fruits. Downing's ($1.50), Thomas' or Barry's ($1.25 each), Fruit books, treat of both small and large fruits. We can send you either work, post-paid upon receipt of price.

Entomological Pins.—Samples received from W. H. Wood. They are delicate, slender, gilded pins, with a small head, and are used for piercing insects and fastening them upon wood or card board. They will not rust, and arc neat and convenient for those collecting bugs, millers, and other insects. Price $2 per ounce.

American Implements.—The Mark Lane Express (England), contains an account of an agricultural Fair at the Cape of Good Hope, where all the plows exhibited, 42 in number, were of American manufacture.

Bottles for Wine.—Subscriber, Medford, Mass. These can be had at the wholesale glass establishments of this city at $6,75 per gross, for 5 to the gallon; $6,25 per gross, for 6 to the gallon. $6 per gross, for 7 to the gallon, and $5,75 per gross for 8 to the gallon.

Cider Making.—J. E. Manson, Rutherford Co. Tenn. Vol. XVII, pp. 22 and 274, of the *Agriculturist*, (Jan. and Sept. 1858,) contained the information asked for We can not now republish these articles.

Mammoth Squash.—H. S. Boltin, Darke Co., O., writes that he raised from seed received from the *Agriculturist*, office a Leghorn Squash weighing 167 lbs. Has any one excelled this?

Chufas.—I. H. M., Wheatland Mills, Pa. These require no special pains to keep them through Winter. Dig and put them in any secure place.

Cheap Microscope.—"Inquirer." The advertised twenty-five cent microscope, you speak of, is a humbug, costing about one cent and worth—nothing.

Sale of Alderney Cows.—The importation of Mr. Thomas Richardson, mentioned on page 303, were sold at auction in this city at from $125 to $187 each The calves brought $50 to $55 per head. This barely covered the cost of importation.

Oregon Oats.—A single head received from W. W. Bristow, Lane Co., Oregon, measures 23 inches in length, weighs ¼ oz, and *counts* 300 kernels!

Good Peaches.—Specimens of "Crawford's Late," raised by W. H. Stiles, of Queens Co., L. I., were received, two of which weighed 14½ oz., and measured 9½ inches in circumference. Ripe September 12.

A correspondent of the Philadelphia *Press* says:

"In the newspaper way nothing is more noteworthy than the change that has lately been apparent in the good old New-York *Commercial Advertiser*. I do not mean a change of proprietorship, for that remains intact, but an infusion of vigor and vivacity into its editorial and reportorial departments, making it one of the freshest and most readable of the evening Press. Punctually, as the clock ticks 4, out comes its third edition, in which everything that happened in town during the day is chronicled in very attractive style. People talk about it. Why shouldn't they? Nothing in the Constitution or by-laws against it.

* * *

From the Christian Advocate and Journal.

The Great Invention.

The poor woman's riches,
The rich woman's bliss.

In the war which is going on among the sewing machines, there is something comforting in the fact that nobody is killed, and the community in general derive a permanent benefit. As in the political world, where a great variety of opinion prevails, and each party has its favorite leader, so among the sewing machines, we find a great variety of opinion, and each one loud in their praises of the one they think the best. Unlike political opinions, however, we regard all the sewing machines as a blessing. From the greatest to the least, from the splendid cabinet machine of Grover & Baker, down to the smallest machine invented, we find a labor-saving benefit to all the families of the land. In so saying, however, we must not be considered as recommending a cheap article, as to our sorrow we have invariably found that a cheap article is in the end the dearest.

We speak from experience when we say that after having tried all the principal sewing machines we must accord to that of Grover & Baker the pre-eminence. Those indispensable features of sewing, strength, uniformity, and elasticity, all of which are brought out in this incomparable invention, make it the first sewing machine in the country. Others have their good points, but this combines all, and possesses every characteristic necessary to make it most desirable. We know one lady whose appreciation of this machine, after a trial of years, is such that she would part with almost every other article of household furniture before she would allow it to be taken. She understands the different varieties of sewing machines, and has tested the merits of all; but Grover & Baker's noiseless machine, with its firm uniform stitch, surpasses, in her estimation, all others. In that lady's opinion we have the most unlimited confidence, her taste and judgment being excelled by none. Nor has her judgment been formed hastily. She has, with a view of thoroughly testing the merits of the different sewing machines, given the most of them a fair trial, and the result is as above stated.

The Grover & Baker company, from being one of the oldest and most successful of the originators and directors of the business, and having associated with it men of the greatest artistic skill, possesses facilities above that of others in making such improvements as are calculated to bring the sewing-machine to perfection. In their magnificent establishment on Broadway, they have in the finest taste fitted up a large drawing-room, where a great number of ladies may be found every day, either learning or perfecting themselves in the art of sewing; and we would say to our lady friends who have hitherto remained skeptical in regard to this great invention of the age, an hour could not be more profitably spent than at this establishment.

* * *

PREMIUMS FOR 1861.

Vol. XX.

(*Subscriptions to the American Agriculturist for* 1861 *can begin now without extra charge.—See page* 320.)

Friends, we desire to run the circulation of our *Twentieth Annual Volume* up to **100,000**. To do this we ask your kind and effective assistance, for which we are willing to divide with you all the income above the bare cost of carrying on the paper and our own living. After close figuring, and liberal terms from manufacturers, we find we can fully keep up the character of our paper, and even *improve* it, and yet offer you the large premiums named below. These articles are offered as direct pay for time spent in canvassing for names. *This year we make no distinction between new and old subscribers*, though it is supposed that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ In selecting articles for premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers. ☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second hand thing, will be sent out, but each article offered is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing for competition. Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he, or she, is working for; and also that if a higher premium is not secured, a lower one can be taken.

☞ The work of collecting names can begin *now* with special advantage. See last page (320) for extra inducements to new subscribers.

☞ Any extra specimen copies, or show bills, needed by canvassers, will be freely furnished. We have on hand a good show bill for this year, and shall have a new one out for 1861 before the close of this year.

☞ Of course only one premium can be paid on the same subscriber.

☞ Every person collecting names for premiums, can send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent, one of them marked at the top, "For premiums," also with the name of the sender. These duplicate lists will be kept on file by themselves, to be referred to in making up the premium when any person has completed sending in names for Volume XX.

☞ The premiums are offered for subscribers for Volume XX (1861), whenever received. Canvassers will have time for completing their lists, but the premium will be paid as soon as any list is made up—if duplicate lists are sent, to refer to at once.

☞ No premium is sent till *specifically asked for*. We have many friends who send in large lists but will take no premium, and we are not certain that premiums are desired, unless the fact be mentioned particularly.

☞ It is believed that all can recommend this journal to their friends and neighbors, and urge them to take and read it. It will continue to be independent, outspoken, and reliable, the special friend, advocate, and promoter of the farmer's interest, and will aim to facilitate and lighten the labors of every household. A larger number of instructive as well as pleasing engravings, and a greater amount of really useful information, will be given in the next volume, than in any preceeding one. *Onward, upward*, is our motto.

☞ Premiums A, to J, are offered for subscribers at the lowest club price (80c.), or at the regular price ($1) Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

Premium A.

140 Subscribers at 80 cents each, (or **95** at $1 each,) will entitle the person getting up the club to one of *Wheeler & Wilson's* best **$50 Sewing Machines**, new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly three years' use in our own family. We want no better.—The machines will be selected new at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

Premium B.

130 Subscribers at 80 cents each, (or **90** at $1 each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopædia**, now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Ten volumes are now ready, and the remaining five will be furnished as fast as issued. Price, $45.

Premium C.

98 Subscribers at 80 cents each, (or **69** at $1 each,) will entitle the person getting up the club to one of *Willcox & Gibbs'* **$35 Sewing Machines**, including a set of **Hemmers**. This is the best machine of its kind, (sewing with one thread), and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one for some time past in our own family, we can recommend it to those who can not afford to buy the higher priced double-thread machines. (The regular price of this machine is $30, but we have included in our offer $5 extra for the set of *Hemmers*, because those used with this machine are very simple and effective, and should go with every machine sent out.) The machines given as premiums, will be selected new at the factory, be well boxed, and will be forwarded to the recipient free of expense, except for freight after leaving the city. They will go out set up ready for use, with printed directions for operating.

Premium D.

65 Subscribers at 80 cents each, (or **32** at $1 each,) will entitle the person getting up the club to one of the New **$10 Wringing Machines**, described on page 247 of the August *Agriculturist*. This is one of the best labor-saving and clothes-saving inventions of the day, and we unhesitatingly say that it will pay to have one to assist in the washing of every family, even if of only moderate size. We would not take $50 for our machine, if another could not be purchased.

Premium E.

60 Subscribers at 80 cents each, (or **30** at $1 each,) will entitle the person getting up the club to one of Kendall's **Aneroid Barometers**, described on page 232 of the August *Agriculturist*. This is a good portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. (Price $10.)

Premium F.

50 Subscribers at 80 cents each, (or **26** at $1 each,) will entitle the person getting up the club to one of the best $8 **Straw and Hay Cutters**. [If preferred, the best $8 **Subsoil Plow** (two-horse) will be given.]

Premium G.

42 Subscribers at 80 cents each, (or **22** at $1 each,) will entitle the person getting up the club to the new and enlarged $6½ *Pictorial Edition of* **Webster's Unabridged Dictionary.** This standard work comprises **1748** large 3 column pages. It is not only an ornament to every house, but is of great practical use; and its full definitions place it next to the Cyclopædia as a source of general information. It weighs 8½ lbs., and can go by express; or be sent by mail for 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium H.

40 Subscribers at 80 cents each, (or **21** at $1 each,) will entitle the person getting up the club to one of the best $6½ **Hand Corn Shellers**, a convenient, effective, and useful implement.

Premium I.

30 Subscribers at 80 cents each, (or **16** at $1 each,) will entitle the person getting up the club to one extra copy of Vol. XX, and also to the 4 previous unbound **Volumes** of the *American Agriculturist*, (16, 17, 18, 19) *sent post paid.*

Premium J.

26 Subscribers at 80 cents each, (or **14** at $1 each,) will entitle the person getting up the club to a $1 **Pocket Microscope**, with the celebrated "hour-glass," or Coddington lens, in a solid silver case. Sent post-paid.

Premium K.

25 Subscribers at 80 cents each, will entitle the person getting up the club to an extra copy of Vol. XX, and also to any *three* of the unbound volumes 16, 17, 18, and 19, sent post-paid. ☞ **20** Subscribers at 80 cents each, to an extra copy of Vol. XX, and *two* of those volumes ☞ **15** Subscribers at 80 cents each, to an extra copy of Vol. XX, and *one* of the previous volumes.

Premium L.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid anywhere within 3000 miles. (If to go to the British Provinces or the Pacific Coast, the recipient will need to send 84 cents for the extra postage required above the 6 cents per ounce which we pay. This and the next premium, if sent with our box of seeds, going to California in February, can go without the extra expense for postage.)

Premium M.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Osborne & Hodgkinson's* **Water Color Paints**, consisting of 24 colors or shades, put up in a mahogany case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, they will answer for ordinary practice by children or beginners, and for common sketching. They will also be sent by mail, post-paid. (If to go to the British Provinces, or to the Pacific Coast, $1.05 will need to be sent by the recipient to pay the extra postage above 6 cents per ounce.)

Premium N.

10 Subscribers at 80 cents each, will entitle the person getting up the club to any *one* of the four previous unbound volumes (16, 17, 18, 19,) sent post-paid.

Premium O.

237 Subscribers at 80 cents each (or **125** at $1 each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one (costing $150) for two years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums will be sent new directly from the factory at Buffalo, ready boxed, and without extra expense to the recipient, except for freight after leaving the factory.

☞ The above premium list might be made up by the members of a congregation, and an instrument thus secured for a church.

Premium P.

182 Subscribers at 80 cents each (or **105** at $1 each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$60 Melodeons** (4½ octaves.) See remarks above.

Premium Q.

130 Subscribers at 80 cents each (or **90** at $1 each), will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$45 Melodeons** (4 octaves.) See remarks above.

Book Premium.

Valuable Book Premiums.—Instead of the above premiums, any person getting up a club of 20 or more names, may choose any desired Books from the list (advertised on page 316) *to the amount of* 12½ *cents for each name forwarded at* 80 *cents*, (or 32½ cents for each name sent at $1,) and the books will be sent post-paid (If to go over 3000 miles, the recipient will need to send 20 cents for extra postage on each dollar's worth of books. ☞ Persons making up a club for any of the above premiums, and getting some names over the required amount, will be entitled to books for the surplus names.

Business Notices.

☞ *Sixty Cents a Line of Space.*

THE CINCINNATI
DOLLAR WEEKLY TIMES.
A Premium to every Subscriber!!
JUST IN TIME FOR THE CAMPAIGN.

The Dollar Times, one of the best Family Journals published in the United States, and having the largest circulation of any weekly in the West, can be had for

ONE DOLLAR PER YEAR!

IT IS IMPARTIAL IN POLITICS;
INDEPENDENT ON ALL SUBJECTS;
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It finds its admirers among all parties and its patrons in all sections.

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Of the first class in all that is requisite thereto. To still further increase the circulation of such a journal, the proprietors, in view of the political condition of the country, have thought proper to issue a political Chart, containing a large amount of information, all of which is IMPARTIALLY RENDERED and reliably compiled from the best information. It is entitled

The People's National Chart;

AN IMPARTIAL GUIDE EOR THE CAMPAIGN OF 1860.

This is one of the most complete National Charts that has ever been placed before the people. It is an IMPARTIAL GUIDE to ALL PARTIES, and will furnish FAITHFUL STATEMENTS in regard to MATTERS OF REFERENCE in the campaign. It is, in fact, a

Handsome Double Chart 30 by 44

Inches in size, handsomely embellished, and will contain as follows:

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Together with a large amount of

VERY VALUABLE INFORMATION,

Of a National character. Each Chart will contain a fine Portrait, either of

Bell, Lincoln, Douglas, or Breckenridge,

As may be ordered by those desiring to obtain them.

Any person, from this date henceforth, to the end of the Campaign, remitting us $1, will be entitled to one year's subscription to the DOLLAR TIMES, and a copy of this useful Chart. Send in your orders to

C. W. STARBUCK & CO.
No. 61 West 3d Street, Cincinnati, O.

WHEELER & WILSON'S
SEWING MACHINES.

Are not only intrinsically "The best in use," but are the only machines that meet all the wants of the public. They are the favorites for family use, are preferred for shirt making, vest making and tailoring purposes generally, and much esteemed at the South, for plantation work, where the sewing ranges from the finest to the coarsest fabrics.

"There is no better family machine than this made, as we have proved by nearly three years' use in our own family. We want no better."—*American Agriculturist*, September, 1860.

Office, 505 Broadway, New-York.
SEND FOR A CIRCULAR.

GROVER & BAKER'S
CELEBRATED NOISELESS
FAMILY SEWING MACHINES,

No. 495 Broadway, New-York; No. 18 Summer st., Boston; No. 730 Chestnut st., Philadelphia; No. 181 Baltimore st., Baltimore; No. 58 West Fourth st., Cincinnati. * * *For our own family use* we became *fully satisfied that Grover & Baker's is the best, and we accordingly purchased it.*"—*American Agriculturist.*

☞SEND FOR A CIRCULAR.☜

SANFORD'S HEATERS,
Portable or set in Brick,

Are pronounced by the most competent judges to be *the best*, giving the largest amount of heat, with a small quantity of fuel—owing to their being so constructed as to burn the gases and smoke, and with the largest radiating surface so arranged as to warm the air rapidly to a soft summer heat.

Eight sizes, adapted to warming only one or two rooms, or a whole house, churches, academies, public halls, &c.

THEY ALWAYS PLEASE.

THE NEW AIR-TIGHT CHALLENGE RANGE now ready.

Send for testimonials (free) to
SANFORD, TRUSLOW & CO., Manufacturers,
239 Water-street, New-York.

Market Review, Weather Notes, etc.

American Agriculturist Office,
New York, Wednesday Evening, Sept. 19, 1860.

An unusually active business has been transacted in Breadstuffs during the past month. Receipts of the principal kinds have been quite heavy, and sales very extensive. Early in the month, reports of bad weather and short crops in England and France, and the opening of the French ports to foreign vessels, caused an advance on previous prices. Within the past week, however, accounts have been received of a very favorable change in the weather, particularly in the British Islands, and a consequent depression in the leading English markets. Hence, holders have made some considerable concessions to buyers, in order to induce the latter to purchase freely. At the close, trade is unsettled, and prices are irregular and declining. With the expectation of heavy arrivals from the interior,—the anxiety of receivers to dispose of their supplies is increasing, and though a liberal export inquiry is confidently anticipated, it is generally feared, that, with the unusually large crops harvested in this country, this season, prices will not rule very high, though the demand of the South, together with the foreign wants will prevent very great depressions...... Cotton has attracted more attention from purchasers at a shade firmer rates. The new crop prospects are now interesting the trade. The new growth which was started by the late rains, has become a leading feature in the crop question. Different opinions exist of the probable result of this new growth in producing Cotton, but the more intelligent view is, that with fine weather and a late frost, it will reach maturity, and thus partially repair the damage by drouth. It is entirely a weather question, however, and therefore wholly in the future. The rains were not unattended with harm in some places, and in portions of the bottom-lands of Texas and Louisiana we hear they have been too abundant, accompanied with the usually attendant complaints of rust, boll-worm etc. Crops in the Red River districts do not compare favorably with the large yield of last year, but in the Yazoo and Mississippi valleys, on river bottoms and overflowed lands, full crops will be made. Sufficient rain has now fallen; and as Cotton is rapidly opening, fine weather for picking will be of the first importance, though we have yet to experience the wet weather incident to September. The ultimate result of the crop is yet an open subject, and owing to its present peculiar position, no estimate will be entitled to confidence till after the first killing frost...... Hops have been decidedly brisker, having been actively sought after by shippers and speculators, at improved prices. Large sales of this year's crop have been made, for future delivery, at from 25@30 cts., closing generally ot 30 cts. per lb......Seed Leaf Tobacco has been unusually active, two or three thousand cases having been disposed of within our revised range of prices......Wool has been in fair request at full rates......The movements in most other kinds of produce have been moderate.

Current Wholesale Prices.

	August 18.	Sept. 19.
Flour—Superf to Extra State	$5 20 @ 5 45	$5 15 @ 5 60
Superfine Western	5 05 @ 5 15	5 15 @ 5 30
Extra Western	5 25 @ 7 50	5 40 @ 7 00
Fancy to Extra Genesee	5 45 @ 7 50	5 65 @ 7 00
Super. to Extra Southern	5 50 @ 7 50	5 70 @ 7 50
Rye Flour—Fine and Super.	3 30 @ 4 10	3 50 @ 4 30
Corn Meal	3 50 @ 3 75	3 35 @ 3 90
Wheat—Canada White	none selling.	1 36 @ 1 43
Western White	1 30 @ 1 50	1 30 @ 1 50
Southern White	1 35 @ 1 50	1 35 @ 1 52½
All kinds of Red	1 15 @ 1 34	1 12 @ 1 34
Corn—Yellow	66 @ 68	68 @ 70
White	68 @ 80	70 @ 80
Mixed	62 @ 62½	66 @ 66½
Oats—Western	37½@ 39½	39 @ 40½
State	39 @ 40½	40 @ 41
Southern	35 @ 38	36 @ 49
Rye	77 @ 78	79 @ 80
Barley	none selling.	70 @ 80
White Beans		None selling.
Hay, in bales, per 100 lbs	80 @ 95	70 @ 1 00
Cotton—Middlings, per lb	10⅝@ 11	10¾@ 11
Rice, per 100 lbs	3 75 @ 4 87	4 60 @ 5 00
Hops, crop of 1859 per lb	7 @ 14	15 @ 20
Pork—New Mess. per bbl	18 20 @18 30	19 00 @19 12
Prime, new, per bbl	14 @14 25	14 00 @
Beef—Repacked Mess	8 50 @10 50	9 00 @ 9 75
Country mess	4 75 @ 6 00	5 00 @ 6 00
Lard, in bbls. per lb	12½@ 13¼	12¼@ 13¼
Butter—Western, per lb	11 @ 15	12 @ 17
State, per lb	11 @ 21	16 @ 22
Cheese, per lb	7 @ 10½	9½@ 11½
Eggs—Fresh, per dozen	12 @ 14½	13½@ 15
Western, per doz	9 @ 12	10 @ 14
Poultry—Fowls, per lb	11 @ 12	13 @ 14
Chickens, per pair	37 @ 62	62 @ 75
Geese, per pair	2 00 @ 2 50	1 00 @ 1 50
Ducks, per pair	@	38 @ 50
Turkeys, per lb	14 @ 16	12 @ 14
Feathers, Live Geese per lb.	44 @ 54	44 @ 52
Seed—Clover, per lb	8½@ 9	9 @ 9½
Timothy, per bushel	4 00 @ 4 25	2 25 @ 2 75
Sugar, Brown, per lb	6¼@ 8½	6 @ 8¼
Molasses, New-Orleans, pr gl	47 @ 50	45 @ 49
Coffee, Rio, per lb	14¼@ 15¾	13¼@ 15¼
Tobacco—Kentucky, &c. pr lb	3 @ 12	3 @ 12
Seed Leaf, per lb	4 @ 25	6 @ 25
Wool—Domestic fleece, per lb.	34 @ 58	34 @ 58
Domestic, pulled, per lb	28 @ 48	28 @ 48
Hemp—Undr'd Amer'n pr ton.	130 @150	150 @160
Dressed American, per ton	160 @200	200 @220
Tallow, per lb	10 @ 10¼	10 @
Oil Cake, per ton	31 00 @38 00	31 75 @39 00
Apples, Prime, per barrel	1 25 @ 2 75	1 25 @ 1 50
Common per bbl		75 @ 1 00
Crab per bbl		2 00 @ 2 50
Pears, Prime, per bbl	3 00 @ 5 00	5 00 @10 00
Common, per bbl		1 25 @ 2 25
Peaches, per basket	2 00 @ 3 00	1 50 @ 2 00
Plums, per bushel	2 50 @ 4 00	3 00 @ 8 00
Nutmeg Melons, per bbl	2 00 @ 2 75	1 00 @ 1 25
Dried Apples, Per lb	4½@ 5½	4½@ 5
Dried Peaches—pr lb. South'n	6 @ 14	8 @ 12
Dried Cherries, pitted, per lb.	13 @ 20	19 @ 20
Potatoes—Mercers, p.bbl	1 50 @ 2 25	1 87 @ 2 25
Junes, per bbl	1 62 @ 1 75	1 37 @ 1 50
Dyckman, per bbl	1 50 @ 1 75	1 50 @ 1 62
Sweet, per bbl		2 00 @ 3 00
Onions, Red, per bbl	2 25 @ 2 50	1 75 @ 2 00
White, per bbl		1 75 @ 2 75
Turnips, per barrel	1 25 @ 1 50	1 25 @
Cabbages, per 100	3 00 @ 6 00	2 00 @ 3 00
Squashes, Marrow, per bbl	1 12 @ 1 50	1 00 @ 1 25
Green Corn, per 100	50 @ 87	50 @ 75
Beets, per bbl	@	1 00 @
Tomatoes, per bushel	75 @ 1 00	50 @
Lima Beans, per bushel	62 @ 75	56 @ 75

TRANSACTIONS AT THE N. Y. MARKETS.

Receipts.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats*
27 bus ds *this* mon	425.371	2,711.792	2 014.862	32,167	22,411	359,526
26 bus. ds. *last* mon	221,520	1,285,000	1,858,400	12,300	22.465	387.500

Sales.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
27 business days *this* mon.,	553.130	3.374,000	2,658,000	52,600	12,350
26 business days *last* mon.	431,335	1,676,450	1,815,000	22.600	——

Breadstuffs exported from N. Y., from Jan. 1 to Sept. 18.

	1859.	1860.
Wheat Flour, bbls	481,941	999,133
Rye Flour, bbls	4 096	6,094
Corn Meal, bbls	58.940	67.319
Wheat, bush	32,765	4.791.338
Corn, bush	163,922	2,006,871

The official returns of the Cotton Crop of the year ending August 31st, 1860, make the total yield **4,675.770** *bales*. The crop for the last 18 years was as follows:

	Bales.		Bales.		Bales
1859–60	4,675.770	1853–4	2,930.027	1847–8	2.347.634
1858–9	3.851,481	1852–3	3,262.882	1846–7	1 788,651
1857–8	3,113,962	1851–2	3.015.020	1845–6	2,100.537
1856–7	2.939.519	1850–1	2.355,257	1844–5	2.394.503
1855–6	3.527.845	1849–50	2.096.705	1843–4	2.030,409
1854–5	2,847,389	1848–9	2,728,596	1842–3	2.378,875

The receipts at tide-water of the principal articles of Produce, from the opening of the Canals to and including the 7th of September, have been as follows:

	1858.	1859.	1860.
Canal open—	April 28.	April 15.	April 25.
Flour, bbls	1,087,502	226.539	436.115
Wheat, bush	5,350,051	820.520	5 976,968
Corn, bush	3.459,164	1,700,036	10,347,246
Barley, bush	414.065	168,675	84.306
Oats, bush	2,771.967	2,550,932	3,900,465
Beef, bbls	7,325	12,005	4 513
Pork, bbls	19,347	32.472	6,471
Bacon	2.987,206	1,763,770	458.464
Butter	180,125	271,700	169,290
Lard	1,797,494	3.553,740	812.885
Cheese, lbs	168,504	230,600	178.800
Wool	2,348,051	1,812,962	1,754,875

N. Y. Live Stock Markets.—The Cattle Markets have been abundantly supplied; Receipts for the past five weeks 25,518 or 5.103 per week—an unusually large average. Markets rather dull, and prices moderate. Stock for the present week, 5.366, selling at 9¾c.@10c. per lb net weight for prime cattle; 9c.@9½c. for good; 8c.@8½c. for poor; and for "cullings" of which there are too many, 6c @7½c. General average 8¾c.

Veal Calves.—Receipts have been light, numbering but 3,125 for five weeks past. Trade is not active at this season, but all the stock sells at 6½c.@7c. per lb. live weight for nice calves; 5½c.@6c. for medium; 5c. for poor

Sheep and Lambs are abundant.—Receipts for 5 weeks 75.762, or 15,152 per week, a large increase over last month. They sell fair, at 5c. per lb., live weight, for very fat, prime sheep, and 4c.@4½c. for medium. Arrivals for present week 17,079 making an overstocked market.

Live Hogs.—Receipts for 5 weeks 25,557, or 5,111 per week. Hogs sell as fast as they arrive, at 6½c.@6¾c. per lb live weight; 6¾c. for fair to prime corn fed hogs; and 6c.@6¼c. for still fed hogs. For the past week, 1,414 live hogs and some 4,000 dead hogs have been received.

The Weather, since our last report, has been variable, with sudden changes from heat to cold, and abundance of water has fallen during the period. There have been no frosts in this vicinity, although they have occurred a little north of here. Vegetation is now so far advanced, that little injury would result from frost.—Our Daily Weather Notes, condensed, read thus: August 19, clear and fine—20, cloudy—21, cloudy, very heavy rain at night—22, passing clouds, and hard rain at night—23, clear and warm, rain at night—24, cloudy, heavy rain again at night, thoroughly saturating the soil—25, 26, 27, clear and fine—28, clear A. M., light rain P. M.—29, 30, 31, fine, cool weather——Sept. 1 to 5, clear and fine—6, cloudy—7, clear A. M., cloudy P. M.—8, smart showers P. M., and hard rain at night—9, rain A. M., clear and cool P. M.—10, clear and coldest day of season, mercury 48°—11, cloudy, cool, rain, and snow squalls at night—12 13, clear and cool—14, 15, milder—16, cloudy A. M., clear P. M.—17, showers—18, 19, clear and fine.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit). *r* indicates rain.]

AUGUST.

1......62	8......73	14......63*r*	20......71	26......66
2......60	9......73	15......58	21......71*r*	27......64
3......64*r*	10......70	16......58	22......68*r*	28......65
4......68*r*	11......72	17......62	23......70*r*	29......57
5......71	12......65	18......65*r*	24......70	30......60
6......67	13......71*r*	19......69	25......69*r*	31......66
7......69				

SEPTEMBER.

1......62	4......57	7......68	10......51	13......50
2......57	5......64	8......71*r*	11......58	14......53
3......59	6......69	9......55	12......55*r*	15......57

Free Seeds for 1861.

As in former years we shall provide a large assortment of valuable seeds to distribute *without charge* to every subscriber desiring them. The seeds will consist of various kinds, for the Field, Garden, and Flower Plots. The list will he announed as soon as we can get our collection together. Part of them are now growing on our own ground ; others are being grown for us ; and we shall make a large importation from Europe o those best obtained there. These seeds will in many cases be worth to the subscriber more than the cost of the whole year's subscription. Especially will this be the case in distant parts of the country remote from access to good and reliable seed stores

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The older sorts of Isabella, Catawba, Clinton, &c

Foreign sorts for culture under glass of best sorts.

200 Acres of Fruit Trees in large or small quantities.

Greenhouse Plants, Hardy Border Plants, Bulbous Roots, Strawberry Plants, Raspberry of Everbearing and other good sorts.

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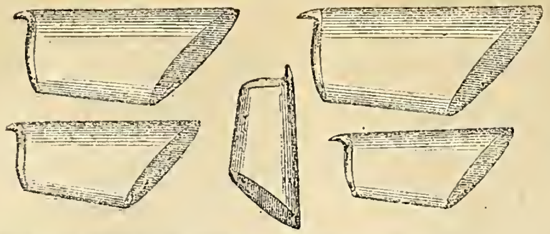

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Keep it before the People that we challenge comparison or test trial with any thing in the whole catalogue of Husking Machines and Implements, and will give a premium of $100 for any thing that equals us in *actual utility*, either for husking corn from the shock, or from the hill.

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This new apparatus combines all the advantages of the Caldron Kettle, Steam Boiler, Heater, Furnace, &c., in a cheap portable form, and of sufficient capacity and strength for domestic purposes. It is peculiarly adapted to cooking large quantities of food for hogs or other stock, and heating water, scalding hogs, steaming timber, kiln drying lumber, or other substances, heating milk for the dairy, washing clothes, trying lard and tallow, making soap, sugar, &c., &c.

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Price No. 2 (usual size) complete	$30 00
" " without stove for arch	20 00
" kettle separate	5 00

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A. N. Wood & Co.,

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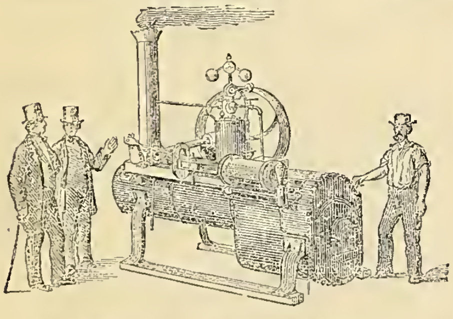

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A. N. WOOD & CO.
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FERTILIZERS—Peruvian Guano, Bone Dust, Phosphate of Lime, Dried Blood and Wool, Plaster, &c.

Orders solicited for the above, and for STEAM ENGINES and MACHINERY OF ALL KINDS, which shall receive prompt attention, and be filled on our best terms.

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PORTABLE, CHEAP, DURABLE, combining simplicity of action, regularity of its grinding unequalled by any; grinds eight bushels hardest corn per hour, with two horse power, and only 250 revolutions per minute. It obviates all the objections to CONICAL or ROTARY motion, the grinding plates working upon principles of Burr and Mill Stones, with similar dressing; weighs three hundred pounds. Any kind of power runs it, driving a belt. Send for Circular.

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HAY AND STALK CUTTERS,
GRAIN MILLS,
THRESHING MACHINES,
a great variety, and at low prices. R. L. ALLEN,
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—Endless Chain and Circular Powers of our own and other patterns, a large variety at manufacturers' prices.

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A Positive Cure for Leaky Roofs and superior to all other preparations in use for all the purposes that paints are used. Ground in all Colors, and no Tar, Pitch, Lard, Gravel, Turpentine, or Cheap Oils used.

Tested on many thousand Roofs—Bottoms of Vessels—outside of Buildings, and other places, where a waterproof and indestructible coating has been required

Silver Medal and several Diplomas awarded.

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Griffing's Improved Potato Digger

The best Digger ever offered to the farmer. It is easily converted into a double mold-board Plow. Farmers! call and see it at GRIFFING BROTHER & CO'S
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INGERSOLL'S IMPROVED PORTABLE HAY PRESS, for packing *Hay, Cotton, Rags, Hemp, Broom Corn*, &c., &c., 700 of these machines having been sold during the last three years, letters from every State in the Union testify to their *superiority, convenience* and *economy*.

Price. *Hay Press No.* 1, $50; wt. of bale 150 to 200 lbs. No. 2 $75; wt. of bale 250 to 300 lbs. Cotton Press, $150. Any sizes, and for any purpose of packing, made to order and delivered on shipboard in New-York. Address for Circulars or Machines FARMERS MANUF'G CO., Greenpoint, Kings Co., N. Y.

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CORN SHELLERS,

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WILLARD'S PATENT ROOT CUTTERS,

Sold at wholesale and retail at the
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Share's Patent Coulter Harrow.

For preparing the ground for Wheat, Rye, or Grass Seed, is the most effective implement in use, as also for covering Grain, many farmers prefer it to the Grain drill.—For sale by
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SHARE'S Patent COULTER HARROW,

SHARE'S PATENT PLANTER AND HOER.
SHARE'S PATENT HOER.
For sale by R. L. ALLEN, 191 Water-st., N. Y.

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Cook's Patent for converting Sorghum, Cane, and Maple juice into finely granulated sugar in 30 to 60 minutes. This is the only successful Sorghum evaporator yet invented, and it possesses decided advantages over other evaporating pans for either maple or cane juice. For sale at the Agricultural Warehouse of R. L. ALLEN, 191 Water-st., New-York.

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It will cut and grind five bushels of corn stalks a minute.
Price $35. Send for a Circular.
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THE HYDROPULT

will, by the power of one man, throw water at the rate of eight gallons per minute fifty feet high, with great force. It is the best article ever invented for

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WATERING GARDENS,
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WETTING SAILS,
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This article should be owned by every householder. It does away with the necessity of a hydrant. It is a light, portable FORCE-PUMP, always ready, easily used, and will come in frequent use by every farmer, merchant, and mechanic in the community. Please call and examine the article at No. 41 Park-Row, Times Building, or address the

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Agents wanted throughout the United States to sell the Hydropult. Apply as above.

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Washing Machines.

SIMPLE, ECONOMICAL, DURABLE.

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IT WILL WASH AND RINSE

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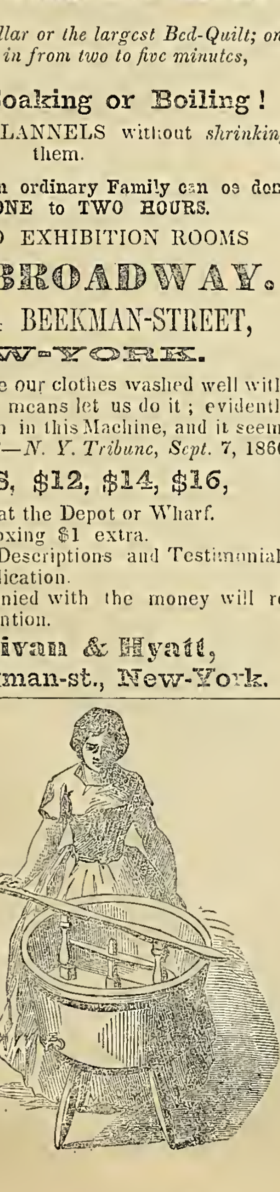

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"1. That, as the result of the said improvement, the voice of the piano is greatly improved in quality, quantity, and power.

"2. The sound by STEINWAY'S improvement is much more even, less harsh, stronger, and much better prolonged than that realized in any other piano with which we are acquainted.

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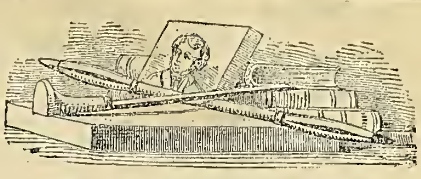

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☞No Grease is required ☜

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We would call the attention of Guano Dealers, Planters, and Farmers, to the article which we have on hand and for sale at
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which we claim to be superior to any Guano or fertilizer ever imported or manufactured in this country.

THIS GUANO IS IMPORTED BY
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It has been satisfactorily tested by many of our prominent Farmers, and analyzed by the most eminent and popular Agricultural Chemists, and found to contain (as will be seen by our circular) a large per centage of
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For A. LISTER & BRO'S, Tarrytown, N. Y. Superior Fertilizers, viz : Superphosphate of Lime made from Raw Bones ; fine, medium, and coarse ground bones, bone dust, &c , &c. suitable for all agricultural purposes. All the above fertilizers warranted pure, and of the very best quality.

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American Guano. Bone Dust.
Superphosphate of Lime.
Dried Blood and Wool. Land Plaster. Poudrette.
For sale at lowest market price, and in quantities to suit.
R. L. ALLEN, 191 Water-st., New-York.

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EXCHANGING.

For the purpose of obtaining a complete list, and samples of all the journals in the country, (that we may have them on file for advertising purposes of ourself and others,) we send this number as an *Exchange* to every paper not now on our exchange books—so far as we can get the address. Please send at least one or two copies of your paper addressed: *American Agriculturist*, New-York City.

We will be happy to place any journal desiring it, on our exchange list, for a time at least, and continuously, if mutually desirable. Those papers **not** now receiving the *Agriculturist*, and wishing a further exchange, will please send a copy marked **X**. We hope ultimately to be able to have a card or advertisement of the *Agriculturist* in most of the Journals of the country, and shall this year advertise as extensively as we can find time to attend to. We believe the *Agriculturist* is worthy a place in every family in the country, or if it is not, we mean to make it so, and then to try to get it there.

We should be glad to have those journals which have not already noticed the *Agriculturist* insert an editorial notice, something like the one below, if agreeable. Whenever this is done, and a marked copy sent, the paper will be placed on our exchange list, at least until the end of 1861; and we hope to reciprocate the favor in some more substantial manner, hereafter. We will at least keep a copy of your paper on file to be referred to by advertisers.

[We think our cotemporaries can consistently copy a notice like the following. No effort or expense is spared to make the *Agriculturist*, not only *practical*, but every way *reliable*.]

A Good Paper for Every Family.

All our readers may not be acquainted with one of the most valuable agricultural and family journals in the country, now in its nineteenth volume. We refer to the *American Agriculturist*, which is a large and beautiful journal, devoted to the practical labors of the Field, Garden, and the Household. It is prepared by practical men (and women) who know what they write about, and it gives a great amount of valuable information, useful not only to farmers, gardeners, stock-raisers, fruit growers, and those who have little village plots, but also to every family. We advise our readers to send $1 to the publisher, ORANGE JUDD, 41 Park-Row, New-York, and try the *Agriculturist* a year. A specimen copy can doubtless be had by sending to the publisher. Those subscribing now for the twentieth volume, (1861,) will get the remaining numbers of this year without charge.

Acknowledgment.

Our especial thanks are due to our cotemporaries for the very favorable and generous manner, in which they have noticed the recent change in the location of our office. We shall be happy to see our editorial brethren at our new quarters, whenever they come this way.

From the New-York Daily Times, Sept. 5.

A Good Indication from Cultivators.—Those who have had occasion to pass the Times Buildings during a few days past, will have noticed a new occupant in the commodious premises adjoining the publication office of this paper, and extending from No. 41 Park Row through to No. 151 Nassau-st. The *American Agriculturist*, now closing up its nineteenth year, has deserted its ancient habitation among the agricultural warehouses on Water-st, and has taken up its abode for the next ten years, at least, in the very center of the great newspaper establishments of the City that have for some time past been concentrating around "Printing House Square." The eminent success of the *American Agriculturist*, which now counts its 50,000 subscribers, while due in part to the correct policy of the publisher, viz.—to get up the best possible paper without regard to expense, and then to make it widely known by liberal advertising—is also an indication of the increased desire on the part of cultivators for information upon the best methods of tilling the soil. The present circulation of the *Agriculturist*, it may be remarked, is greater than that of the entire agricultural press only a few years ago.

A Thoroughly Independent Journal.

For particular reasons, we desire to state here a fact, well understood by our older readers, viz.: that the *American Agriculturist* is totally *independent* of all outside interests The proprietor has not the slightest pecuniary interest in the manufacture or sale of any implement, fertilizer, plant, or other article; and should any one of the several associate or contributing editors become connected with any enterprise which would be likely to warp his judgment, it would be considered ample reason for dissolving his connection with this journal. The position we aim at, is like that of an attorney or counsellor, specially employed to promote the individual and general interests of our readers, and to defend them to the utmost of our ability. We have endeavored to keep this in view, not only in the reading, but even in the advertising columns, so far as practicable; and hence we have, as a general rule, rejected patent medicine and humbug advertisements, though repeatedly offered large sums above our usual terms to insert them. Advertisements from persons believed to be unreliable in their business transactions, have also been excluded. If in the editorial columns we describe or commend any article, it is done for the benefit of the readers. We have no right to recommend or "favorably notice," or even advertise any article simply for the benefit of the manufacturer or seller, or for pay received.—"Better one suffer than many," is the true motto—better that one inventor, manufacturer, or seller, remain poor, than that the many should purchase his wares at a price beyond their value.

A PERPETUAL EXHIBITION.

Convenient tables are now arranged in the large room of the *American Agriculturist* Office for the exhibition of Fruits, Flowers, and other Agricultural and Horticultural Products. We have already had a fine show of flowers, with some fruit, which have been visited by many thousands, and we expect soon to have large contributions of interesting natural objects, including constant additions of plants and flowers in bloom at the various seasons of the year. Plants from the Green House will supply a pleasing winter display. Residents of this city, and all others coming here will, therefore, find it worth their while to drop in at 41 Park Row when passing that way.

Cultivators are invited to send interesting products to our tables. We will endeavor to provide room for all objects interesting to the public. (A portion of our room is still used, temporarily, by the former occupants, the American Hydropult Company, who will amuse callers with a display of their apparatus. As soon as required the whole of the floor, unoccupied by our own business desks, will be given up to exhibition purposes.)

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ORANGE JUDD, No. 41 Park-Row, New York.

AMERICAN AGRICULTURIST,

ADAPTED TO THE

Farm, Garden, and Household.

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ORANGE JUDD, A. M., EDITOR AND PROPRIETOR.

ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE.
SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 11. NEW-YORK, NOVEMBER, 1860. [NEW SERIES—No. 166.

☞ **Office at 41 Park-Row,** (Times Building.)
☞ **Contents, Terms, &c., on pages 348-52.**

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American Agriculturiſt in German.

The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs. A club may be part English, and part German.

November.

" 'Tis easy to resign a toilsome place,
But not to manage leisure with a grace;
Absence of occupation is not rest,
A mind quite vacant is a mind distressed.
The veteran steed, his task excused at length,
In kind compassion of his failing strength,
And turned into the park or mead to graze,
Exempt from future service all his days,
There feels a pleasure perfect in its kind.
Ranges at liberty, and snuffs the wind,
But when his lord would quit the busy road,
To taste a joy like that he had bestowed
He proves, less happy than his favored brute,
A life of ease a difficult pursuit."—COWPER.

The only period of rest in the circle of the farmer's year is now at hand; a period of enjoyment, but also one of peril. The business of cultivation—the appropriate occupation of the husbandman—is done. He has passed through the pressing cares of seed time and tillage, the joys of the early and latter harvests, and has welcomed the last of his crops to the barn and the granary. His store houses are full, and the flocks and herds now live upon the accumulated provisions of the Summer. The last of the flowers has faded, and the frosts have turned field and forest to a russet brown. The leaves that put on such gorgeous coloring in October, are now either changed to a somber hue, or fallen, leaving the forest bare and desolate. The skies have lost the roseate hue of Summer, and begin to look chill and wintery. The weather is fitful, and every sunny day is succeeded by cloud and storm.

In the olden time farmers accomplished very little after the potatoes and turnips were gathered and the cider was made, until the opening of the Spring. At home, the cider barrel had its potent temptations, and abroad, the village tavern and grocery held out their allurements to drinking and dissipation. The country was new, the soil fertile, and the farmer did not feel the necessity of those improvements which prepare the way for successful cultivation. Draining had hardly been heard of, and the muck mines were not opened. He fed his cattle, prepared his fuel for the Winter fire, marketed his crops, and the rest of his time ran to waste. At this season he visited his friends, enjoyed their hospitalities, and too often contracted their drinking habits and prepared the way for debauchery and ruin. It was the most perilous period of the year, because he had not learned how to improve its leisure.

We are so constituted that we can not *enjoy* idleness. This may satisfy the toil-worn brute, as he quits the yoke or the cart and regales himself in fat pastures. He knows nothing better than the gratification of his appetite for food. But man can not be satisfied while the best part of him, that which constitutes his manhood, lies waste. The mind must have occupation of some kind, and the release from the more pressing cares of cultivation at this season, should only induce a higher activity of the mind.

It is indeed well to employ a portion of this leisure in visiting friends and relatives, and in keeping alive the sympathies and associations of earlier years. Some are so situated in their business, that this is the only time when they can return to the old homestead, to look again upon the familiar scenes of childhood, and to receive words of blessing from father and mother. These social reunions at the annual Thanksgiving, are worth all they cost, and more. There is a reviving influence in going back again to the old hearth-stone of childhood's home; the old well and its oaken bucket, the ancestral trees gathering new glory with their increasing years, the garden, the orchard, the fields, the forests where our eyes first opened upon the world. The farmer is made a better citizen and a better man by thus cultivating his social nature, and keeping alive the ties that bind him to his kindred.

These annual visits are also profitable for his business, as they afford opportunities for observation. Farming is no longer a stereotpyed business. One can hardly visit the most limited and obscure rural district without seeing abundant evidence that the leaven of new ideas is at work. The tillers of the soil are getting out of the old tracks of the fathers, and are beginning to use *mind* in their husbandry. The barn is no more a mere depository of the harvests of the field. It is a manufactory of fertilizers, the one thing needful in profitable tillage. It is the great hinge on which every thing in the operations of the year turns. Barns are now a profitable study, to learn how practical farmers contrive to shelter all their cattle, and to make the most of their manure. The plow has become a tool constructed upon scientific principles, turning the furrow with the least expenditure of strength, and making it broad or narrow, deep or shallow, and laying the slice flat, or at a sharp angle with the surface of the field, at the will of the plowman. Tools have become a prime necessity of economical cultivation, and the strength of the ox and the horse is more and more taking the place of human sinews. No one can observe the different methods of farmers in their business, without learning something profitable. He will return with new ideas and a new zest to the cultivation of his own acres.

Nor need the season upon which we are entering, be wholly lost to the farm. In many parts of the North, plowing can still be done for the first half of the month, and the surface of the fields be left in that rough, broken condition, in which the freezings and thawings of Winter will most benefit them. There is no human invention that will break down rough clods and pulverize them like the frost. Farmers are using this season for labor, much more than they did in the olden time. Trenches are dug for walls, and stone fences are built. Some keep their full laboring force at work—an arrangement much better for the laborer, than four months of idleness, or occasional work by the day. Many have muck deposits so situated that they can be worked at this season. Muck thrown up in Summer, can be carted, and the deposits in the barn cellars can be composted with manure from the stables and the sties. Many improve the leisure to top dress their meadows with compost from the yards, and where the land lies level and is not subject to washing, this is a good practice. It is found by shrewd calculators, that the labors of the next four months, spent mainly in handling muck, digging, composting, spreading, and laying up stores for Summer use, are the most profitable of the year.

Whatever labors are attended to or neglected out of doors, reading and reflection should be carried on vigorously within. The most successful farmer now, is the man who applies most of *thought* to his business. The days of routine farming are numbered, and the man who plods on in the ways of his fathers, is certain to be distanced. The problem to be solved is, not how to grow crops—not even great crops—but how to get them economically. We want to get rich by farming, without selling off all the fertility of the soil under our feet. A rich farm, giving a generous yield to toil, makes a rich farmer, whether he have much or little stock in the bank or railroad. He may be sure of dividends when banks fail. We want to study not only to get great crops of corn and grass, but to make the crops pay for the labor and manure, and leave the soil richer. There are manifold details of husbandry that require forecast and reflection. Now is the time to lay plans for the coming year, and for the distant future. It is a great work to bring up a long used soil to its primitive fertility, and to manage the old homestead so that every acre shall do its best, making us richer while it enriches itself. To solve this problem will tax the invention and quicken the intellect. He who does this, will "manage leisure with a grace" and grow a wiser and better man, and also increase his wealth.

Calendar of Operations for Nov., 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the North, and later for the South.

EXPLANATIONS.—*f* indicates the *first; m*, the *middle;* and *l*, the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

It is necessary that what now remains to be done in securing late crops, be finished quickly; frost and snow will soon take full possession of the fields, to act their important part in ameliorating the soil and preparing it for future tillage. If the cultivator has controlled the growth on his fields, allowing no weedy intruders to ripen their seeds, he has little to fear from the sweeping winds—if otherwise, every blast will send hundreds and thousands of these, his enemies, flying to their safe winter quarters, to emerge in Spring, ready to dispute with his crops for the mastery of the soil.

In addition to completing preparations for Winter—making every thing comfortable for the family in the house, and the family at the barn—drawing and composting muck, finishing drains, threshing and marketing grain, etc., will afford profitable employment. The present leisure from more pressing work may be turned to great profit in reading, study of the *science* of farming, and planning for future improvement.

Buildings—Examine after hard storms, and keep in thorough repair. Painting may yet be done better than in Spring or Summer.

Cattle—Feeding at the barn is now necessary. A great saving of food, and much benefit to the manure heap, is secured by cutting and cooking food. Stalks and other coarse feed so treated, will be readily eaten up clean. Feed from racks or boxes, and give variety as well as plenty of food. Read on subsequent pages "Economy in Feeding," and "Comforts for Cows."

Cellars—As the cold becomes severe, protect against frost. Straw or leaves are preferable to manure for banking against doors and windows. There will be less danger from frost, if sufficient ventilation be afforded to carry off moisture. In constructing houses, a ventilating flue should be carried up from the cellar toward the top of the building.

Cisterns and Wells—Arrange pumps and other fixtures so as to prevent freezing.

Corn—Complete husking, *ff*, if not already done. Shell and market as soon as favorable prices are offered. Guard against depredations of rats and mice. Save stalks, leaves, and husks for fodder.

Draining can be done until frost prevents. Keep sluice-ways upon the highway open, and occasionally examine drain furrows among Winter grain.

Fruit—Remove apples and pears to the cellar before they are frozen. It is important that they be kept dry and cool, and secure from rats and mice. Hanging shelves are convenient for ripening choice late pears

Grain—Select the best growth for seed, if not attended to before. Thresh as fast as practicable. Allow no straw to be wasted; use it cut and mixed with meal for feeding, and for litter in the stalls and yards.

Hedges—Plant deciduous, *ff*, *m*, if the soil be dry; otherwise leave until Spring.

Hogs—Complete the fattening as rapidly as possible. Give plenty of *cooked* food. An occasional mess of potatoes with their meal, will keep up their appetite; a little sulphur occasionally is also beneficial. Provide for early pigs by turning a male among the breeding sows, *m*, *ll*.

Horses—Give plenty of cut feed, and add carrots, which are both wholesome and nutritious. Oats in the sheaf, run through the cutter, make excellent feed. Give plenty of straw for bedding. Construct gutters at the rear of the stall for conducting away urine. A covering of muck upon the stable floor makes a soft standing place. The stables should be warm, but well ventilated; many diseases are contracted in foul stables. Keep horses well shod for traveling on frozen ground.

Ice Houses may yet be constructed if unsupplied. Have them in readiness to be filled at the first favorable opportunity.

In-door—Cultivate the *mind* during the leisure of the season.

Leaves are useful for bedding, for manure, and for protecting plants. Read "Save the Leaves" on page 330.

Manures—Now is the time to commence to husband the stores for next year. Supply abundance of muck to absorb liquids and gases, and to compost with cleanings from the stable. Use also plaster about the stables, poultry house, etc., to fix escaping gases; allow nothing to waste that can be turned to account.

Plow heavy clay lands intended for cultivation next Spring, and leave the furrows to be harrowed by the Winter frosts.

Poultry should be *kept* fat, to be profitable. Supply them with plenty of grain, and give waste meat chopped fine, two or three times a week. Allow them gravel, and ashes or chip dirt to wallow in; they need sunshine, and also free access to water; treated in this way, they will give a good supply of eggs. Fowls for market should be confined separately, in small coops, fed liberally with boiled corn, and kept quiet.

Pumpkins—Continue to feed to fattening animals and to milch cows. If there be a large supply, store where they will be safe from frost until used.

Schools—Give the children the best school advantages that can be procured. Allow them to commence early in the season, and to attend *regularly*. Encourage them by frequent visits at the school house, and sustain the authority of the teacher.

Sheep—Provide ample sheds and feeding racks apart from other stock. Do not keep them in the pasture too late in the season. Feed regularly, and allow free access to water. Roots with hay, will be found profitable. Salt at least once a week. For early lambs turn in the buck, *m*, *l*.

Stacks—It is wasteful of hay and manure to feed from the stack upon the surrounding grounds. Draw it to the barn and feed out under cover.

Sorghum Sugar Cane—Complete cutting and manufacturing, *ff*. It may be kept under cover several weeks without injury—moderate freezing, after cutting, does not spoil it.

Tools, etc.—Have all implements, carriages, carts, etc., under cover, and improve rainy days by repairing and painting such as need it. Clean and oil harness, and put sleds and sleighs in running order.

Turnips and Carrots—Harvest any remaining, *ff*. Store in the cellar or in pits, with sufficient protection from frost.

Water Pipes—Cover with straw or other proper material where there is danger of freezing.

Winter Grain—Keep all animals from the fields; the roots need the late growth for Winter protection. Let no water stand on any part of the surface.

Wood—Prepare a supply of fuel to be drawn when snow comes. Cut out dead or decaying trees, and trim out thick undergrowth. Swamps may be cleared as soon as frozen sufficiently to bear a team.

Orchard and Nursery.

The latest fruit is now to be gathered and stored, or made into cider. Before the trees are left for their winter rest, much may be done for their benefit. If Summer pruning has been neglected, it is better to attend to it this month than to leave it until Spring. Multitudes of insects have deposited their eggs under the loose bark and moss of the trunk and larger limbs; and others are comfortably burrowed under ground, in different stages of being, waiting until Spring shall warm them into life. Scrape the trees thoroughly; plow the ground, not deeply enough to disturb the roots, and hoe or fork over the soil near the trunks. Besides the exposure of insects to frost, plowing will destroy the nests of mice, and eradicate the weeds and grass in which they are harbored.

In the nursery the busy season of filling orders, transplanting, increasing stock, etc., will leave little leisure while the ground remains in working order.

Apples—Plant *ff*, *m*, for new orchards, and to fill vacancies in the old. Many unoccupied corners about the buildings and along lanes can be profitably used for fruit trees.

Cherry trees planted in the Fall in this latitude are liable to be killed by frost. Further South, the present time is favorable.

Cider—Finish making before the apples decay or are injured by freezing. Read article on page 334.

Cions—Cut at any time this month, when not frozen, and bury in dry earth, either out doors, or in the cellar.

Fruit—Gather, *ff*, any remaining. Preserve in a cool, dark, and dry place. The cooler fruit can be kept without freezing, the longer it will remain sound. Separate bruised or decaying apples or pears from the general stock, to be used first.

Grapes—Plant vines, *ff*. Prune, *ff*: for full directions see page 340. Lay tender varieties upon the ground and cover with straw, hay, or other litter for Winter protection. Hardy sorts do better if treated in the same way. Remove, say six inches of the soil around the roots, if insects have been troublesome, and replace with fresh sifted earth. Read article "Microscopic Insects," on page 332.

Insects—Give the borer and scale no quarter. Examine twigs for eggs of the caterpillar.

Manure—Top dress orchards and fruit yards with compost, to protect the roots and enrich the soil.

Mice—Where these or other vermin are troublesome, wrap the lower ends of the trunks with thick tarred paper. Allow no hedge-rows near the trees.

Nursery Rows—When transplanting is completed for the season, plow between them, and turn the furrows toward the trees to protect them, and give good surface drainage. If possible, transplant all seedlings this Fall.

Pear Trees—This fruit is rapidly increasing in popularity. Set out an abundant supply. It is better to cultivate a few varieties of known excellence, enough to keep up a succession of fruit, rather than to fill the grounds with a great number of sorts. Give a good top-dressing of manure to be forked in in Spring.

Pruning is better performed now than in Spring. August is probably the *best* season for this work, except in warm climates; there, the present month is favorable.

Quinces—Gather and market, or preserve the fruit as it ripens. Plant trees, *ff*, *m*.

Seeds of Apples, Pears, Quinces, Plums, Cherries, Peaches, and the various nuts and hard-shelled seeds—plant *ff*, *m*, if not already done as directed last month.

Stocks—Transplant all the hardy ones into nursery rows. You can spare the time better now than in Spring. Others may be heeled in over Winter.

Tender Seedlings, especially evergreens, need some protection in the nursery. Sift in dry sand to protect the stems, and cover with forest leaves, straw, or evergreen boughs, for the first Winter.

Kitchen and Fruit Garden.

There is little to be done in this department, except by the market gardener, who will be busy preparing for early crops for the following season. The roots yet in the ground are to be gathered, rubbish cleared away, and draining and trenching to be completed.

Asparagus—New beds may be made, and roots set or seed sown, *ff*, *m*. Cover the beds, *m*, *l*, with several inches of coarse manure.

Beets—Complete harvesting, *ff*, before hard frosts. Feed the tops to cattle or pigs.

Blackberry plants may be set while the ground remains open; it is better to put them in earlier.

Cabbages and Cauliflowers—Harvest the late crop and store in cellars, or bury them in the open field. Place young plants in cold frames.

Carrots—Dig and store the remaining crops, *ff*.

Celery—Continue to earth up, *ff*, in dry weather. Harvest, *m*, *l*. Stand it upright on level ground and cover with earth. Allow no earth to fall between the stalks.

Cold Frames—Prepare for use, *ff*, and set in them, *f*, *m*, the cabbage, cauliflower, lettuce plants, etc., requiring Winter protection. Cover with glass or shutters during cold nights, but keep open by day as long as the weather will admit. When Winter sets in, cover securely, banking up about the sides, and put straw, leaves, etc., over them to exclude frost. Every mild day, open for a short time.

Currants and Gooseberries—Plant roots of improved varieties, *ff*, *m*. Divide and reset those that have become an unproductive hedge. Fork up the ground around the roots, to destroy insects. If they have proved very troublesome, replace the soil with fresh earth. Give a coating of manure to protect and stimulate the roots.

Drain and trench heavy soils; they may thus be worked earlier in Spring.

Figs—Bank up about the trunks, and bend, and cover the branches with earth or straw.

Fruit Trees—Plant in all suitable places.

Grape Vines—Plant roots and layers, *ff*, *m*. Prune and preserve the cuttings in boxes of earth for planting next year. Take vines from the trellis, and cover them with straw or earth.

Mice—Guard against their intrusion into the cold frames. Dishes of meal, poisoned with arsenic, will soon dispose of them.

Onions—Cover with litter those left in the ground during Winter.

Parsneps and Salsafy are improved by leaving in the ground until Spring. Dig, *m*, *l*, for use in Winter, and cover them with earth in the cellar.

Poles, stakes, frames, etc., should all be gathered and housed for future use.

Raspberries—Plant out, *ff*, if not done last month. Cover canes of tender sorts with an inch or so of earth.

Rhubarb—Set roots and crowns, *ff*, *m*. Cover with coarse stable manure, to protect the roots and enrich the soil.

Spinach—Hoe and thin the plants, and cover with straw or other litter.

Strawberry Beds—Cover lightly with leaves, or coarse litter. An inch in depth is ample.

Turnips—Gather before injured by frost, and store for household use and for feeding to stock.

Flower Garden and Lawn.

In some localities, especially at the South, the directions of last month have not been completed, and are the first to claim attention. Every preparation for Winter should be made early, before severe frosts injure the plants. The half hardy varieties are now to be removed to pits, covered with straw or evergreen boughs, or laid down and covered with earth.

If the bulbs have not been planted, lose no time, but put them in at once, as advised last month, and under "Hyacinths" on a subsequent page. Set out a good supply of them, as they will be certain to please, when in bloom in early Spring.

Chrysanthemums are nearly the only flowers which have survived the repeated frosts. It is now that their chief attractions are brought out as lengtheners of the floral seasons. As soon as the flowers are killed by frost, the roots may be divided and reset. They will make a better show if transplanted this Fall, than if left until Spring. Carry a few into the houses for a Winter bloom.

Climbers—Most of these, like the wistaria, ivy, honeysuckle, climbing rose, etc., come out fresher in Spring, when taken from trellises and laid upon the ground. A slight covering of earth, straw, or leaves, will still further protect them.

Dahlias and gladioluses have probably been killed by frost, and the roots should be carefully lifted, and put in a cool, dry cellar, or other place out of the reach of frost. We prefer keeping them in boxes of dry earth or sand. If too damp, they will mold, and when very dry, they shrivel. A good vegetable cellar is a suitable place for them.

Flower stalks, annual climbers, and any decaying plants, or those which have completed their bloom, should be removed as unsightly objects. Put everything in neat order for Winter.

Frames and pits should be in readiness for tender plants, *ff*. See directions on a subsequent page.

Hedges may still be planted on well drained soils, *ff*. Leave evergreen hedges until next Spring.

Lawn—Rake off all rubbish, and give a coating of manure to protect the roots and enrich the soil.

Ornamental Work, such as vases, baskets, urns, statues, wire works, etc., should now be stored under cover. Repaint those needing it.

Perennials will give a finer bloom another season, if transplanted now, rather than next Spring. Divide the roots of such as are to be increased in number. Pæonies, lilies, and a few other plants will flower feebly, if set in Spring.

Roses—Protect tender ones by laying down, and covering with earth or leaves; or they may be potted, and carried to the cellar or pit. If to bloom in Winter, set them in a cool place for a rest; afterward expose them to a moderate warmth. Climbing and pillar roses, even if hardy, will show a better bloom next Summer, if laid upon the ground during the Winter; no covering is needed.

Shrubs and Ornamental Trees—Plant, *ff*, *m*, in appropriate places upon the lawn and along the borders. They usually give the finest effect when set in clumps or masses.

Green and Hot-Houses.

Where there are two or more houses, some for merely keeping the plants alive, or securing a moderate growth, and others for increasing a stock by propagation, or forcing them into a Winter bloom, the treatment must be varied essentially, and general directions only can be given. Some extensive propagators have a rose house, a camellia house, a house for a few of the tropical plants nearly allied to each other, an orchid house, several houses for grapes, etc., amounting to acres covered with buildings, and only an experienced person can attend to them successfully. In general terms, each house must be managed with reference to its contents, and the objects to be attained.

Having put the Green-house proper in order, and stored it with those plants needing Winter protection, or which are only to be forced at a future time, attend particularly to ventilation, as the change from out-door air to a confined room should not be suddenly made. During rains, fogs, and frosty weather, the doors and windows should be closed, and, before the end of the month, some fire heat will be beneficial. Little water will be needed, and but little care in other respects; the plants may be left to a quiet rest. The decayed leaves should be picked off as they appear, and every thing be kept neat. A good stock of bulbs should be potted to be taken to the forcing house at intervals for a Winter bloom. The green-house is also the appropriate place for keeping a supply of the various plants to be taken to warmer apartments for flowering during the Winter.

The Hot-house should be attractive even thus early in the season, as many of the blooming plants have not ceased to flower since their removal from the borders, and others are coming into bloom. A nearly uniform heat should be maintained, ranging from 55° to 65°, or even 70° in some collections. One of the first things requiring attention, is to have a full stock of young thrifty plants put in a growing condition, to furnish a succession of bloom during the entire Winter. A variety of annuals should be sown at intervals, for the same purpose. Some of those put in last month, are now ready to pot, and in a few weeks a full bloom may be expected.

Bulbs should be brought from cooler apartments only as they are wanted to bloom. They may be put singly in glasses, or small pots, or several of them may be grown in a large pot.

Camellias are beginning to push out anew, and some of the flower buds are well swollen. Syringe and water more freely, giving them light and air.

Fires will need careful attention, as a little neglect often causes much mischief. Most of the plants being tender, a near approach to the freezing point will check their growth, while too much heat will unduly force or scorch them. A thermometer is an indispensable requisite. If a stove is used, keep a tank of open water to supply moisture by evaporation. This is not as essential with hot water or steam pipes.

Grapes—Prune and lay down, or tie up vines which have ripened their wood. Give them a season of rest now. If the roots are in an outside border, cover them with manure, straw, etc.

Insects—Keep them in check at the beginning, or they will increase rapidly. Hand picking, syringing, and tobacco fumes are appropriate antidotes.

Pots, Tubs, and Boxes, containing growing plants, should be frequently examined. Keep the drainage open, remove weeds and moss, loosen the soil and add liquid manure or rich earth to those plants which are flagging. Prune or pinch to a good form, and have them all arranged in a convenient handsome order—the lower growing varieties in front.

Soil for potting should be liberally provided for immediate use and for future wants, as it improves by long keeping.

Verbenas, Pelargoniums, Petunias, Salvias, and other bedding plants, should be layered now, or cuttings inserted to provide a supply for Winter flowering, and for planting out in the Spring.

Water—Give moderately, more to rapid growing plants, than to those which are resting. Syringe the floors and walls frequently, to induce evaporation.

Apiary in November.

BY M. QUINBY.

The mice will begin to commit depredations in the hives of some of the weakest stocks during the cool nights of this month. Their work may be known by crumbs of comb under the hives. Set traps for them at once, and have them out of the way, or they will prove troublesome during the Winter.... If feeding the needy stocks has been neglected till now, it will be necessary to improve every warm day, until it is completed. It can not be done in severe weather, without having them in the house, and then it is not good economy to disturb them. Prepare material for hives, that it may be well seasoned. Hives that are to be painted, should be finished as long before hand, as possible, even now would be none to soon. Bees seem to dislike the odor of oil. A *dark* color should be avoided. Three or four of the lighter colors are better than only one, and when such hives are used, the different colors should alternate, that each bee may better know its own hive. The young queens in their excursions to meet the drones, are very liable to get lost on their return, without some distinguishing mark about the hive, to designate where they belong.....Any one contemplating obtaining the Italian bee, should also have the movable comb hive. Without it, one half the advantage can not be realized. There are half a dozen or more patents on this principle, any one of which is superior to the common box, for those who know how to take advantage of them. The bee keeper with hives which enable him to bring every bee and cell into view, and then return them to the hive without injury, is much more likely to become interested in bee culture, than those having only the old box. We are told that the Italian bee is much more mild—less disposed to sting—than the common sort; if so, I see no good reason why *every* bee keeper should not understand the whole subject from center to circumference.

Our Exhibition Tables.

As announced last month, we have provided at the office of the *Agriculturist* ample tables for the free exhibition of noteworthy products from the Field, Orchard, Garden, etc. The design is to keep open a perpetual Show, where at all times of the year, vegetables, fruits, and flowers, in their several seasons, together with novel useful implements may be placed for public examination. During the past month, our tables have presented a most attractive display, and at this date (Oct. 18.) they are covered with a show which would do credit to a town or county fair. Our thanks are especially due to the several contributors. Thousands of visitors, both residents and strangers, have expressed their gratification with this new and appropriate feature of the *Agriculturist* establishment.

As before stated, our accomodations are ample, and the invitation is repeated to all who choose, to exhibit, free of charge, whatever appropriately belongs to this department, if of interest to the public.

In addition to sundry agricultural and horticultural curiosities, prepared birds, etc., and the articles alluded to in our last, the following are among the specimens shown during the past month.

VEGETABLES, ETC.—A large mountain Sweet Watermelon, 3 ft. in circumference, 20 in. long, wt. 43 lbs., from (label lost) Westchester Co. N. Y., ... Mammoth Beet, weighing 24 lbs., Rev. W. W. Howard, Kings Co., L. I.—Also Mammoth Beet Jr., 14½ lbs., from Westchester Co., N. Y., ... Large Cucumber, from Wm. M. Robbins, Suffolk Co., L. I. .... Honolulu Squash, W. A. F., Kings Co., L. I., ... Fig Tomatoes—beautiful clusters, W. F. Heins .... White Egg Plants, fine specimens, W. F. Heins .... Japanese Egg Plants, named Chinese by others, a very showy ornamental vegetable somewhat resembling the Tomato in growth, W. S. Carpenter, and R. L. Allen .... Kohl Rabi, very fine growth, W. Darmstadt, N. J. .... Mottled Corn, very singularly marked, from seed obtained of the Iroquois indians in Western New-York, W. S. Carpenter .... Fine ears Yellow Corn, planted May 24th, harvested Sept. 15th, Chs. E. Parker, Queens Co., N. Y. .... Dent Corn, excellent specimens, Gov. A. J. Rush, Iowa .... Devereux, Improved King Philip and Golden Drop Corn, W. S. Carpenter .... New California Squash, (77 lbs.); New Cuba Squash, of about the same weight, W. F. Heins, N. Y., also Honolulu and Golden Japan Squashes, and fancy Gourds, by same .... Lot of Peach Blow Potatoes, 19½ to 24½ ounces, averaging 21½ ounces each, S. B. Conover, West Washington Market, raised in Monmouth Co., N. J .... Long White French Turnip, Improved Long Orange Carrot, and Blood Red Onions, J. E. Macomber, R. I.

FRUITS.—Apples, 60 named varieties including very fine specimens, W. S. Carpenter. .... Pound Sweet Apples from a full bearing tree, over 30 years old, J. M. Gardner, Westchester Co., N. Y., ... Porter and Russet Apples, G. Banks, Queens Co., N. Y., ... Russet Apples, very fine, A. P. Cummings, (Ed. N. Y. Observer) Westchester Co., N. Y .... Gloria Mundi Apple, weight 3½ lbs., W. S. Carpenter. Pears, a fine collection, 15 varieties, Thomas W. Field, Queens Co., N. Y., also 20 varieties by W. S. Carpenter .... Grapes, Child's Superb, grown at Hastings, Oneida Co., Dr. S. S. Fitch .... Diana and Concord, W. S. Carpenter .... Syrian, a magnificent cluster, weighing 7½ lbs., grown by Lathrop & Munson, Bridgeport. They were afterwards taken to the table of the Prince of Wales, who was at that time in this city. In addition to these, a cluster from the same vine, weighing 5 lbs., is now on exhibition. The vine is 3½ years old, and has this year borne 13 clusters, the largest weighing 7½ lbs., as noted above, the smallest 3½ lbs .... A magnificent Quince, 11 inches in circumference, W. T. Hemmenway, Flushing, N. Y.

FLOWERS.—A fine display of cut flowers from the proprietor's grounds at Flushing. Also beautiful bouquets brought in by E. A. Wright, Queens Co., N. Y.... Dahlias, very perfect specimens, some 20 varieties, A. P. Cummings, Westchester Co., N. Y. Also a beautiful collection of Dahlias, many of them new, H. F. Krause, (of N. Y. Central Park) N. Y.... Glass Flowers, and Fruits, a splendid vase filled with a beautiful collection of flowers and small fruits, made entirely of glass—a rare parlor ornament, J. F. Bode, N. Y.

MISCELLANEOUS.—A pair of living Humming Birds in a glass cage, J. Bode, N. Y.

Improving Prospects for Farmers.

We are happy to report that the present prospect of good prices for farm produce is exceedingly favorable. The harvests in Great Britain have turned out poorly, and the export of wheat, flour and corn, is now very large. For further items see our market review, which is prepared by a competent reporter, who spends his whole time in watching the leading produce markets.

Look out for Humbugs.

We have good reasons for offering a word of special caution to our readers, 'about these days.' At least half a dozen schemes for extensive swindling have come to our knowledge during the past month. "Private" and "Confidential" circulars by the million, are now being manufactured in this city. Great numbers of these are daily sent off, but the business is to be largely increased as soon as the excitement of the Presidential election is over. There is scarcely a family in the United States or British Provinces, whose Post office address is not recorded in from one to a dozen establishments in some of our large cities, and tempting, plausible circulars will be sent through the mails to them, offering all sorts of inducements to get their money.

In lottery and gift enterprises there is nothing new to be specially noted—each scheme, no matter how tempting, is so much of the character of a hundred others that have gone before, that it is surprising how there can be found foolish persons enough to keep these humbugs alive.

One of the most wily schemes to be pushed this Autumn and Winter, is the offer of so-called gold articles, such as magnificent "gold pencils," pens, etc. A few statistics obtained at one of the manufactories of these articles, show that they are being turned out by the ten thousand. A "gold pen and magnificent case," is stamped out of some cheap metal, and then galvanized over with the thinnest possible film of gold. The whole is done so skillfully, that the common observer will find it utterly impossible to distinguish between a bona fide article worth $3 to $6, and the bogus one costing 6 to 15 cents! The outside film of gold, though less than the two-hundred-thousandth part of an inch in thickness, is yet enough to cover up the inside base metal, and protect it from the usual acid test, while the filling of cheap metal prevents detecting the deception by the weight. We have seen a pen and case that cost 16 cents to manufacture, that was offered as a $3 premium or "gift" and no one but a practical goldsmith or jeweller could detect the deception. The same remark applies to various other gilded (not gold) articles.

These humbugs and many others were so thoroughly exposed in our previous volume that we have deemed little on this topic to be needed during the present year. It now looks as if it would be soon necessary to again go into a regular overhauling and exposure of a lot of new "humbug enterprises."

Let it be remembered, first, that the more splendid and plausible the scheme held out to the public, the greater is the concealed deception; and second, that if one is led to open a correspondence with these humbug operators, even out of curiosity only, there are ten chances to one that the "wool will be pulled over his eyes" and that in the end, he will be "taken in and done for."

SEWING MACHINE AND OTHER "AGENCIES."—Since writing the above, a gentleman from Pennsylvania called with one of the circulars alluded to, asking him to act as agent for a new Sewing Machine, to be sold at $16 each, and offering him $6 profit on each machine. He was requested to send $10 for a sample to show. Happening to be just coming here, he called on us, and learned that the machine was just like others formerly sold under another name, for $5 each, and good for nothing at that. It is doubtful also, if anything would have been heard from the $10 had it been forwarded. There are several such agencies offered, for sewing machines and other articles.

Warming Dwellings, School-Rooms, Churches, etc.—An Important Hint or Two.

A world of comfort, to say nothing of health, would be saved to the great mass of people, if they understood one simple philosophical principle, and applied that knowledge to the warming of their dwellings. Let us examine the matter a moment, now that all are providing for the approaching cold weather. We will try to explain the principle referred to, so as to be understood by the unscientific reader.

Common air has the property of absorbing a certain amount of moisture or water, which it secretes or hides, and it becomes insensible, so to speak. The *amount* of water, which a cubic foot, or a room full of air can thus secrete *depends upon the temperature of the air*, that is upon how hot or cold it may be. Thus, at the common Summer temperature, say 70°, a hundred cubic feet of air absorbs or renders insensible to sight and feeling, about 794 grains of water. Reduce the temperature of this air to the freezing point, 32°, and it will hold only 235 grains of water—the rest will be deposited on the colder surfaces. On the contrary, raise the temperature of the air to 100°, and it will then absorb 1912 grains of water.

Illustration.—A room, 15 feet square and 10 feet high, contains 2250 cubic feet. Therefore, in such a room the air at the freezing point (32°) would contain 5288 grains of water, or a little more than three-fourths of a pint. Raise the heat to a comfortable warmth, say 70°, and the air will absorb and secrete 17,865 grains of water, or over 2½ pounds (2½ pints.) At 100° it would absorb 43,020 grains, or over 3 quarts. More than this must be provided for, or the air will be dry and disagreeable. On a warm Autumn or Spring day, the air will appear dry and clear, though it contains a large amount of moisture. But at night the cold ground reduces the temperature of the lower stratum of air, and the result is that the moisture, which during the day was insensible, is now *sensible*. The air is damp, and the moisture is frequently visible in the form of fog. There is really no more moisture in the air, but what was concealed when it was warm during the day, is now made sensible. As soon as the sun heats up the air sufficiently, it again conceals the moisture, and the atmosphere is clear. On a hot day the air is dry and clear above us, and not a cloud is to be seen. Presently we see mists and clouds gathering over-head. These clouds do not come from a distance, but they are formed right in the air which but a few hours ago was apparently so dry and clear. The reason is, that by some means, say by a cold current of air, the temperature of the air has been reduced, and the moisture, before invisible, is now visible. The minute particles of water unite together, so as to be seen in the form of cloudy vapor; and if the reduction of temperature goes on, the particles of water will condense still further, and form drops of water, that descend as rain.

Now for the application. The air in a room contains a considerable quantity of water. If the room be cold, the air feels damp. Close the room, so that the air can not escape, nor be mixed with fresh air from without, and then heat it. As the temperature rises, the moisture will leave the walls, and the entire air of the room will become dry. The water has not left the room during this warming process, but it has been secreted in the air itself, which is now like a dry sponge. It picks up the particles of moisture from the skin and it feels dry and husky. The air we breathe, also dries out the lungs, so to speak. Bring in a dry, cold body, say a pitcher or tumbler of water, and this will cool the adjacent air to such a degree that it will condense the moisture that was insensible while the air was warmer.

In a room heated by an open fire place, there is a large current of air going up through the chimney, and consequently a constant change of air in the room, and the lack of moisture is not felt.

In a room heated by a stove with a narrow draft, there is less consumption of air, and as the confined portion becomes heated, it secretes the moisture of the room, and a dry unpleasant atmosphere is the result. Set a tea-kettle or other vessel on the stove with a little water, so that it will boil briskly, and the watery vapor will soon supply the place of that which has been secreted, and the result will be a warm, moist, genial atmosphere. A fire should never be built in a stove without placing upon it, at once, a wide open vessel of water to keep the room saturated with vapor. Even then, the air will be dry and unpleasant at first, until the water is hot enough to send off vapors or steam freely.

Heating by steam circulating in iron pipes is, on one account, the most unpleasant, not to say unhealthy, methods of warming rooms, and simply because of the difficulty of placing water upon the pipes so as to be rapidly evaporated. Those who are using steam pipes, will find great relief if they will keep moistened cloths hanging over some portions of the pipe, to give out a supply of moisture to the air. Without some means of supplying extra moisture, steam pipes are decidedly objectionable.

We feel quite sure that the method of heating by hot air pipes from a furnace, is the most convenient, agreeable, and even healthful, *provided always* that suitable arrangements be made to keep the hot air constantly saturated with moisture. Without this, the hot dry air absorbs all the moisture from the walls and furniture of the room, and from the surface of our bodies, and from the lungs. Our own dwelling is heated throughout by a furnace in the cellar. A constant current of *fresh* air is conveyed from without to this furnace, where it is warmed by a large heating surface *outside* of the burning coal. Tin pipes convey this *fresh* warm air to the several rooms, in large or small quantities as required. But in the upper part of the furnace, directly over the fire, a large wide open vessel is kept constantly supplied with water, the vapors of which saturate all the warm air ascending to the rooms. The result is, the air is moist, warm, and what is quite important, it is constantly renewed and fresh, which is not the case when the confined air of a room is heated by a stove. We thus get rid, not only of the trouble of building and watching the fires in half a dozen rooms, but also of the dust and ashes necessarily attending their use. There is also an economy of fuel, for the large heating surface of a good furnace appropriates the heat better than the ordinary single stoves. Let the hundreds of families who have unused hot air furnaces in their dwellings, try the effect of providing an abundant supply of moisture along with the heated air.

Any one may readily convince himself of the difference made in the air by the addition of watery vapor. Let two rooms be equally heated by stoves. In one let there be damp clothing, as on an ironing day, while the other has no provisions for supplying vapor. The air in the one room will be dry, husky, and exhausting; in the other it will be as genial and pleasant as a Spring morning.

For the American Agriculturist.

Experience with an Ice House.

It may be interesting to some of your readers to hear my experience in packing ice to keep through the Summer. Before building, I made inquiries of architects and others, as to how an ice house should be built. Some said "have it underground", others "have it above ground," so I concluded I would try both. I built my ice house six feet under ground, and six feet above, eleven feet long and seven feet wide, with a window and blind at each end, about 18x24 inches, giving good ventilation. I used four-inch studs, and filled in to the peak, with sawdust. An experienced hand filled the house, which will hold about twenty tuns. He put joist across the bottom, and packed the ice on straw, using it freely at the sides, and top.

As soon as warm weather commenced, the ice began to melt, and by the first of July, all that was above ground, had been used up, or had disappeared by melting. The underground ice kept better, but all was gone by the middle of August.

Some people said it was because it was a new house, and that it would keep better the second year; I believed it, and tried again; but the result was the same—the ice was gone by the middle of August, and the straw rotted.

Some one then suggested that the thickness of sawdust was not sufficient, and that the heat from the bottom caused it to melt. So I put in another set of studs, and filled in again with sawdust, put down a double floor, and lined that also. I then felt sure it would keep; although by reducing the size, I could only put in 18 tuns. That year it kept till the first of September. I was induced to fill it in the same way again, because they said the ice was not solid the year before, and did not keep in any of the houses. The result was the same, the ice was gone by the first of September.

By that time I had become convinced that straw was not the right thing to put round it, and that unless I could do better hereafter, I would buy ice during the Summer.

I concluded to try once more, and use sawdust. Last Winter I put about six inches of sawdust on the floor, and then packed in the ice, leaving a space of four inches between the ice and the sides, which was filled in with sawdust, and the top covered with about six inches also. On the first of September of this year, we had not used it down to the level of the ground even, and could perceive but very little moisture on that which was taken out daily. At this time we are using it freely, and it comes out in solid cakes. I am not certain but it might keep well, if packed in an empty stall with plenty of sawdust round it, or even in a pen out of doors, if well covered with the sawdust and protected from rain.

YONKERS.

How to Keep Eggs.

A correspondent at Goodwinsville, N. J., has had good success in keeping eggs in the following manner. With an inch-and-a-half auger, holes were bored in shelves, which were put up in a cool cellar protected from frost. The eggs, as fast as collected, were set in these holes, with the little end downward. Some were used in three months, some in six months, and the balance in a little over a year from the time of storing, and all were reported as perfectly good. The cellar in which eggs were kept so well, must, we think, have been very dry and cool. It would be well for those making this experiment to try a small quantity at first; they might not keep as well under all circumstances, as in the case above.

ALBANY BREEDING ASSOCIATION'S SALES.—The annual Auction Sales of this Association for the present year, were not satisfactory or encouraging. A severe storm interfered with the transactions on the day first announced. On the second day, a month later, Oct. 10, the lateness of the season and other causes prevented active bidding, and many animals went for about half the price nominally set upon them.

Of *Horses*, 31 were sold for $5,050, viz.: 2 stallions for $1000; 11 mares for $1,800; 2 three year-olds for $300; 8 two-year-olds for $1,165; and 8 yearlings for $785.

Of *Cattle*, 25 were sold for $3,158; viz.: 8 bulls for $515; and 17 cows and heifers for $2,634. Considering the quality, pedigree, etc.; these prices were very low, and considerably under the real value of the animals. The *Sheep* and *Swine* were not sold.

MANURES PURCHASED ANNUALLY IN ENGLAND.—Prof. Anderson gives the following estimate, of the amount expended annually by the farmers of Great Britain, for artificial manures.

Guano	$12,500,000
Nitrate of Soda	1,125,000
Bones	1,200,000
Superphosphates	2,100,000
Coprolites	1,875,000
Sulphate of Ammonia	750,000
Other Articles	500,000
Total	$20,050,000

This expenditure coupled with improved methods of tillage accounts for the fact, that the average product of wheat in England has been raised from 8 or 9 bushels to nearly 30 bushels per acre.

VETERINARY PHYSICIANS WANTED.—Every farmer should rejoice that Veterinary science is taking its proper place among the professions. But we need ten men skilled in this branch of study, where we now have one. If properly located, they would find it a paying business. Here is a fine field open for our young men, and one worthy of the highest order of talent.

For the American Agriculturist.

How to Tame Bees.—"Ten Dollars worth" of Information Gratis.

Many persons while watching an exhibitor of bees in a movable frame hive, at the Fairs, taking out and returning the frames of combs covered with bees, and, as they hang in clusters from the frames, removing them by handfuls, with no more apparent fear than though they were so many flies, have regarded the process as a sort of witchery; they have thought that none but the operator, and possibly a few others, could have such perfect and fearless control over their bees. Instead of this being actually the case, it is the reverse; for no person that I have yet seen, who has followed the directions for "Taming Bees" that I purpose to give, has been unable, after a little practice, to have full and absolute control over them. I understand that a speculator in Canada has made the proposition "to instruct bee-keepers in the art of taming bees for the exceedingly low price of $10 each!" But the readers of the *Agriculturist* can save their $10 and learn the whole art by observing the following directions, which the writer has practised for years.

The whole art of "taming bees" is embodied in the following: 1st—A honey-bee filled with honey or "liquid sweets," will not sting of its own accord. 2nd—Bees when frightened, will generally fill themselves with honey; and, if given "liquid sweets," will invariably accept of them. Bees may be frightened thus: 1st. By confining them to the hive, and rapping the sides of it lightly with a small stick, or the palms of the hands. At first, the bees will try to get out, but finding that impossible, they will then rush to their stores and fill themselves with honey. 2nd. By blowing upon them the smoke of punk (rotten wood), tobacco, or cotton rags.

What is termed "liquid sweets," is water well sweetened with honey or sugar. Sugar is preferable, as bees from neighboring hives, or those in close proximity, are not so readily attracted by it.

For many years I used mainly the smoke of tobacco and cotton rags, but this season, in all my operations I have used nothing but the smoke of "punk." This is not so pungent as that of tobacco.

In order to make the foregoing directions a little more clear, I will now set forth the *modus operandi* of taming the most irritable colony of bees, in the Langstroth hive; which will answer, somewhat modified, for all colonies in all kinds of hives.

Set the punk on fire, and blow a little smoke into the entrance of the hive. This will cause the bees at and near the entrance, to retreat and go among the combs. Now, take off the top cover, and blow enough smoke into the holes or slats of the surplus honey receptacle cover, to cause all the bees to go below the tops of the frames, when this cover may also be removed. Blow sufficient smoke upon the bees to keep them below among the combs. Unless the colony be very populous, the bees will now nearly all be found hastily filling their sacs with honey, and, will generally be ready to operate upon in from five to fifteen minutes. Should the operator desire to commence taking out the combs as soon as possible, he may sprinkle the bees with the sweetened water. Those not filling their sacs from the cells of honey, will commence at once to gorge themselves with this preparation. I seldom have occasion—except at the Fairs—to use the "liquid sweets." I would advise beginners to use a bee-hat until they have had some experience—which may then, at times, be discarded.

Reader, just operate upon a colony in the way described, you will probably be surprised to find that you can more easily and readily subject the most irritable colony of bees to your control, than can Rarey, an ordinary animal of the equine race. M. M. BALDRIDGE.

Niagara Co., N. Y.

* * *

For the American Agriculturist.

Progressive Bees—Their Operations Explained.

In the September No. of the *Agriculturist* is a communication from "B." headed, "Progressive Bees," in which the writer states that he had a "first swarm" issue on the 23rd of July, and, on the 27th—four days after—a "second swarm" also issued. He desires that some correspondent of "long experience" will give information as to what has caused "this state of things."

As a general thing, second swarms do not issue until the 8th or 9th day after the first; but, it is frequently the case that second swarms issue much sooner, and occasionally somewhat later. When bees are ready to swarm, it will be found on examination of the combs, that there are one or more *sealed* royal cells—the inmates of which will be ready to emerge on the 7th or 8th day thereafter; much, however, depends on the temperature within. The old or matured queen always leaves with the first swarm—the second being accompanied by one or more of the first hatched queens. Now, unless the weather be favorable at the time the first swarm is ready to issue, they will defer swarming till a more suitable time, and will sometimes abandon the project for that season. First swarms have been known, on account of rainy or otherwise foul weather, to defer swarming after the royal cells were sealed, so that the second swarm necessarily issued earlier than nine days after the first. Second, and all after swarms accompanied by young queens, are not so particular about issuing on account of bad weather, as first swarms accompanied by old queens.

Again, queens occasionally die from sickness or old age just before the swarming season commences, and the bees instinctively start one or more royal cells, so as to supply her loss. If the colony be populous, a swarm will generally issue with the first hatched queen, and the second swarm may be expected on the third or fourth day thereafter. It will be obvious that either of these cases will answer the inquiries of "B."

Niagara Co., N. Y. M. M. BALDRIDGE.

* * *

A Concert by the Cows.

When, as it oftentimes happens, we hear the tinkle of a sheep-bell, or cow-bell on the hills, or in the woods, we are reminded of the many pleasing allusions of the British poets to this cheerful rural sound. The bells, it is true, are not generally as musical as they might be, yet they strike a pleasant chord in the heart of every one who loves the country. It has often occurred to us that if the manufacturers of these bells would make some of a superior quality of tone, not a few farmers would be glad to buy them for their herds. It would be a pleasant sound for the traveler, to hear from a distance, as the animals wended their homeward way at night, and it would gladden the ear of the proprietor and his family. We have heard a few such bells.

Within a short time, we have seen it stated that a certain English nobleman has suspended a musical bell on the neck of all his cows, each bell tuned to a different note of the scale, and the whole running through several octaves. A visitor to this farm is charmed by the music, as well as by the sleek sides of the cattle. Sometimes he hears several notes in unison, then a slight discord, and then a sweet harmony, and all varied by distance and by the rising and falling of the breeze.

Such harmonic bells will add nothing to the weight of one's butter and cheese, but they will do something just as good. They will add a charm to farm-life, and weave around it one more of those pleasing associations which serve to attach men to the country and to the culture of the soil. So, tune up a first-rate chime of bells for our herds!

* * *

Fastening Tires with Oil.

[For some time past a paragraph has been going the rounds of the papers, recommending the soaking of wagon wheels in oil. We hardly thought this more worthy of attention than ten thousand other similar plausible but fanciful items that are extensively copied, and go to make up so large a portion of the paste and scissors columns of the newspapers. But a subscriber seriously asks us how to construct the oil heater required; for himself and neighbors have concluded to prepare their wagon wheels in the manner recommended. As an answer, we copy below what the N. Y. Coachmakers' Magazine says of it:

"The following silly paragraph is credited to the *Southern Planter*. A correspondent tells the editor:—"I ironed a wagon some years ago, for my own use, and before putting on the tires I filled the felloes with linseed oil; and the tires have worn out, and were never loose. I ironed a buggy seven years ago, and the tires are now as tight as when first put on. My method of filling the felloes with oil, is as follows: I use a long cast-iron oil heater, made for the purpose; the oil is brought to a boiling heat, the wheel is placed on a stick, so as to hang in the oil, each felloe one hour, for a common sized felloe. The timber should be dry, as green timber will not take the oil[and we will add, none but a *green 'un* will try the experiment.] Care should be taken that the oil be not made hotter than a boiling heat, in order that the timber be not burnt. Timber filled with oil is not susceptible of water, and the timber is much more durable. [But here comes the funny part of the story.] I was amused, some time ago, when I told a blacksmith how to keep tires tight on wheels, by his telling me it was a profitable business to tighten tires; and the wagon-maker will say, it is profitable to him to make and repair wheels; but what will the farmer, who supports the wheelwright and smith, say?" Whatever they may say, we say, fearlessly, that it would require at lest ten "cullored pussons" to hold the felloes on the spokes, that's all!

* * *

PUBLIC SALE OF LANDS IN IOWA.—A proclamation has been made by the President for the sale in Nov. next of 1,125,000 acres of public lands in the Northwestern part of Iowa. These lands embrace some of the best soils in the State on the head waters of Des Moines river.

Harvesting Beans.

It seems to be supposed by some, that beans should remain in the field ungathered, until they are fully ripe and ready to shell out. Experience shows that this is neither necessary nor wise. Watch for the time when the leaves of the plant begin to turn yellow, and the pods have become plump and hard. Then pull and stack them up in the field loosely, putting a few stones or cross-pieces of wood underneath each stack, to keep the bottom tier dry, and to promote ventilation of the whole. Do not forget to stake them firmly, to prevent the stacks from blowing over.

Beans so managed, will ripen a good deal after being gathered, and will command a much higher price in market than if they had been left standing longer, and so been nipped by the frost, and draggled and soaked in the mud. Let them remain thus stacked until dry enough for thrashing.

How Linseed and Cotton Seed Oil, and Oil Cake are Made.

The cultivation of flax belongs to the age of homespun, and has gone by, as a general crop in this country. Fifty years ago it was common on almost every farm, and the brake, the hatchel, the swingling board, and knife, were as much farming tools, as the dung fork and the plow. In-doors were the spinning wheel for flax, and the loom, where the linen and tow cloth were made for Summer wear. Flax seed was then abundant, and oil mills for pressing the seed were to be found at convenient centers. But many of the present generation have never seen such an establishment, and have no idea of the process of making linseed oil. Though flax is still raised in this country in particular localities, the crop does not meet our demands. Large quantities of seed are imported, mainly from Russia, England, and the British East Indies. In the year 1855 over a million bushels were brought to this country from the British East Indies alone.

In making the oil, quite a variety of machinery is used—more or less expensive, according to the enterprise and capital of the manufacturer. The seed is first passed through iron rollers, to be crushed or ground. One of these rollers is made to revolve more rapidly than the other, which subjects each seed to a pulling, as well as crushing process. The meal is taken from the mill to the "chasers" where it is subjected to another crushing process, more severe than the first. The chasers are two large circular stones, about five feet in diameter and eighteen inches thick, rolling upon a third stone, in the manner of an old fashioned bark or cider-mill. These heavy stones start the oil from the meal, and to keep it from adhering to the chasers, it is moistened with water.

The meal is next put into an iron cylinder which is kept revolving over a fire until the water is evaporated. Much of the skill in the art of making oil depends upon this heating process. It must not be scorched, and yet it wants to be brought up to a high temperature, so that it will readily give out its oil. The presses are of various structure, some of them patented, and others not open to public inspection. In the one that we saw, the vats or hoops, holding about two bushels each, were placed opposite each other against two immense beams, or uprights, made fast in the foundations of the building. The followers were forced down upon the meal by two large levers worked by hydraulic power. The meal is kept under pressure about an hour, and the two presses work up about ninety six bushels of seed every twenty four hours. The mill is kept running night and day for six days in the week. The product is not far from two gallons of oil to a bushel of seed, a little more or less, according to the quality of the seed and the skill in pressing. The cakes as taken from the press, are sometimes sold by the tun without grinding. They are generally exported in this form. Where there is a market in the vicinity of the mill, the cakes are put under the chasers, and ground into meal, bagged, and sent to the feed stores. The price of the cake is from thirty to forty dollars a tun; ground into meal, it retails at about two dollars a hundred pounds. This is the favorite feed for fattening stock with the British farmer, and ought to receive more attention among us.

The process of making the cotton seed oil and cake is nearly the same. The seed of the Upland cotton is surrounded with a husk to which the cotton adheres. It is covered with a soft down after it leaves the gin, and in this condition it is purchased from the planter. The seed makes better oil and better meal when it is deprived of this hull and down. There are several patents for decorticating the seed. One is a stone mill, in which the seed passes between rough surfaces and the bark is rubbed off. Another is a steel mill doing the work more perfectly. After the hulling, the treatment of the seed is the same as for linseed. The yield of oil is less, being about ninety gallons to a hundred bushels of the Sea Island, or two gallons to fifty six pounds of the hulled cotton seed. The Sea Island seed does not need hulling.

The cotton seed oil is comparatively a new article. It has not yet a steady commercial value. The meal is growing in favor as an article of fodder. It is adapted to the same uses as the linseed meal, and is by many thought to be as valuable, though it sells for about twenty five per cent less, The manure made from the animals fed upon it, is richer in ammonia than that made from any other kind of stall feeding. There is already a considerable demand for it in England, and it can not be long before the export will exceed that of the linseed oil meal.

An Experiment in Grinding Cotton Seed.

We are convinced upon further reflection and inquiry, that the suggestion thrown out in our last issue upon grinding cotton seed in the common grist mill, is a matter of great practical importance to our readers in the South. If cotton seed brought to the North, deprived of its oil, and ground into meal is worth a dollar and a half a hundred, it ought to be worth much more upon the plantation, ground before pressing, where feeding stuff is in great demand.

The grand difficulty is in the business of grinding. The seed contains so much oil, that the common grist mill would probably clog with the pure cotton seed, and the conclusion would be jumped at, that the mill was unfit for the work. We wish, therefore, to suggest several experiments in grinding; first, a mixture of three parts of cotton seed to one of corn; secondly, an equal quantity of each; and thirdly, three parts of corn to one of cotton seed. The corn being hard and dry, will absorb the oil, and we think, keep the mill clean, so that it will do its work perfectly. Animals are not fond of the pure meal at first, and have to acquire a taste for it, by mixing it in small quantities with other palatable feeding stuff. When the taste is formed, they eat ravenously without any mixture. If our correspondent at Edward's Depot, Miss., who has suggested these inquiries, would undertake these experiments, and report them, we should feel greatly obliged. The manufacture and use of cotton seed meal upon the plantation, we are confident, will form a new era in the husbandry of the Gulf States.

How to Ventilate Stacks.

British farmers ventilate their stacks as follows: They fill with straw a bag, say 3½ ft high and 20 inches in diameter; place it vertically in the center, and stack around it. As the stack rises, they lift the sack, and so on to the top. In this way a chimney is formed in the center of the stack, into which the steam and gases generated, find their way and escape readily. This method might be adopted with advantage in stacking corn fodder.

For the American Agriculturist.

Experience in Reclaiming Worn Out Meadows.

It is often remarked by farmers that the grass on their older meadows has run out, and that they can not plant all their lots, and get round in time to prevent it. They practice keeping the land under the plow for two successive crops, before laying it down to grass again. Some take four or more successive crops; they manure well, as they should, but they do not consider that the rest of the farm is thereby robbed to keep a few acres in full bearing fertility Let any one do this for a dozen consecutive years on the same lot, and the injurious effect on his other fields will be unmistakably visible. My experience teaches a better method, because it increases the fertility of the soil, and renders it in future years more productive.

There is much land in our county, which, although not swampy, is too low and humid in Spring and early Summer, for making sound and profitable corn crops. When I emigrated to Susquehanna some twenty five years ago, I soon found I had several acres of such low, wet soil, in one of my lots. Twice, the grass thereon run out, and each time I had it up three years, under the usual way of treatment, taking off three successive crops. Each time I got a worse surface for the scythe, because I could not entirely subdue the sod; and beside, what was worse, I was evidently reducing the natural strength of the soil. When the grass failed again, I ordered it to be plowed of usual depth, perfectly, and without a balk. The furrows were rolled down and harrowed lightly, to fill up the spaces between; and then oats and timothy seed were sown and well harrowed in for one grain crop only. This was an experiment: I did not expect much—I was not disappointed; but the crop was worth, for feed, as much, if not more, than the hay could possibly have been. The next year the grass was greater than I had ever seen grown before, and of a superior quality. For five years after, the crop annually was equally good.

The next year the grass was evidently failing, and I broke the lot up again exactly as before. This was in 1858. The oat crop this time was full and good, having had the benefit of the old sod; and this year, the grass was fully equal to the yield of any former year; besides, the sod now appears to promise for the future better than at any time before.

I have twice since treated some of my corn lands in the same way, obtaining each time superabundant crops, even greater the first time of mowing than I formerly got after two grain crops. One of our most practical farmers in an adjoining town, about the same time, yet unbeknown to me, commenced the same process of tillage on a large lot of humid soil, in every respect like mine, which had nearly become nonproductive. He is getting extra large crops of hay annually; and he now considers that lot as one of his best, which had long been his poorest, having been least productive.

Susquehanna Co., Pa. S. A. NEWTON.

Tim Bunker at the Farmers' Club.

HOW TO GET RICH BY FARMING.

[Perhaps it might be more modest to omit the following letter from the 'Squire, but it contains some good hints. And here allow us to remark, that these letters, which have been continued so long, and we expect will be continued hereafter, are none of them 'got up' in our office, as some have supposed, but they are veritable letters, sent to us from Connecticut. We are happy to know, that the plain, homespun truths here told, have been of great value to thousands who have read them not only in this journal, but in many others, into which they have been copied.—ED.]

MR. EDITOR: I have not had much to say lately about our farmers' club, that our minister, Mr. Spooner, and a few of us started in Hookertown, a few years ago. Well you see, at first, the thing didn't take very well. It looked kind of bookish, and men accustomed to the plow handle didn't exactly like to come to the schoolhouse where we generally hold our meetings in the Winter, to learn farming. Some of them called it Mr. Spooner's school, and some Tim Bunker's pew. Jake Frink who has never forgiven me for buying that horse-pond lot, and draining it, called it the Horse Pond Convention. In the Summer time we meet around at the farmers' houses, generally once a month, some Saturday afternoon, so as to look at the crops and stock, as well as to discuss questions. Well, by a little coaxing and management, we have got most of the young farmers in the neighborhood of the village interested, so that we frequently have twenty at the meeting, and that makes about as large a company as a plain farmer cares to talk to. My immediate circle of friends are among the most punctual members. Mr. Spooner and Deacon Smith are always on hand to keep things straight; Seth Twiggs comes up to see what he can through his clouds of smoke; Uncle Jotham Sparrowgrass limps around with his invaluable scraps of experience from Long Island, and Tucker, Jones, and Jake Frink drop in to see what new exercise is going on in Tim Bunker's pew.

The club is getting to be a good deal of an institution, if not a great one, in Hookertown. The last topic talked up was "How to make Farming Profitable." We had a stranger into the meeting from Massachusetts, Mr. Pinkham; and he took the ground that it was not profitable, and for his part he did not believe it could be made to pay. He said "he had got a little property together, but he did not make it by cultivating the soil, though he had worked at it thirty years steady. He had a farm given to him to start with, and if he had done nothing else but farm it, he believed he should have run in debt every year. He had worked in the Winter and on rainy days at shoe making, and all that he was worth over and above what he inherited, was owing to his trade."

Uncle Jotham guessed Mr. Pinkham was about right if men managed their farms in the old way. He had known a hundred farmers or more, on the Island, and there want a half dozen of them that got ahead any, until they begun to catch bony fish. This made manure mighty cheap, and plenty, and a man must be a fool that couldn't get big crops with manure a plenty. But to have nothing but barn yard manure, and next to none of that, he didn't think a farmer could more'n make the ends of the year meet.

"I dont believe he can du that," said Jake Frink, "unless he has better luck than I have had.—I've worked hard as an Injun on my land, for well nigh forty year, and I hain't got so much land as when I started. I hev ben allers comin short at the eend of the year, and every now and then, have had to sell off a chunk of land to some lucky naber. And it al'ers happened, that I sold jest the best lot I had, but didn't see it till arter it was gone. That horse pond lot that didn't use to raise any thing but sour grass, bull rushes, and hard hack, now bears three tun to the acre of first rate herdsgrass. Some folks make farming pay, but I never could. Some how it don't run in the blood."

Mr. Spooner said farmers did not have capital enough to carry on their farming profitably. No man can be successful in business without capital. The merchant has his years of discipline as a clerk, and earns a small capital before he sets up for himself. But the farmer often runs in debt for his farm, and has hardly money enough to buy his stock and tools. This keeps him troubled all the time. He is afraid to hire help, to purchase such new machines as he needs, and to make those improvements in his land which are essential to profitable husbandry.

George Washington Tucker thought there was a good deal of truth in Mr. Spooner's doctrine. "I don't know zactly what the parson means by capital, but if he means money, he's jest right. I never had a red cent tu begin with, and that's the reason I haint got along no better. As they used to say in sifering, 0 from 0, and 0 remains. It's jest so in farming."

"Them's my sentiments," said Jones. Now the fact is, both Tucker and Jones are lazy, and never did a good day's work in one day, in their whole lives. The cipher lies in the persons of those two individuals, and not in their purses.—I didn't say that in the club. If I had, I guess I should have spoke in meeting.

I did have to say, however, that I thought the trouble about bad farming lay a leetle deeper than the want of capital or the want of labor. "The want of *brains* I guess lies at the bottom of all the unprofitable farming. What is the use of a man's having money, if he does not know how to apply it to his business? What is the use of a man's having labor, if he does not know how to direct it, so as to make it pay? Farmers do not read enough about their business, and reflect upon it. I know of a dozen farmers who have from one to five thousand dollars in the bank, and they have occasion for the use of twice that sum in order to make their farms productive. Capital in the bank only pays six or seven per cent. In the bank of earth, if wisely invested, it will pay ten per cent. I have got fifteen per cent on what I have laid out on the horse-pond lot."

"Above all expenses?" asked Mr. Spooner.

"Yes above all expenses, and I expect to get it for years to come. I do not find it difficult to make land pay the interest on three hundred dollars an acre, and any man who will read and digest the *American Agriculturist* can do the same thing."

"Where is that paper printed," inquired Pinkham. "I've heard tell so much about that paper, and about improvements Squire Bunker has made since he began reading it, that I've a notion to take it myself a year, and see what it is, any way."

"At 41 Park Row, N. Y., by O. Judd, and it only costs a dollar a year, and often you get a dollar's worth of seeds thrown into the bargain."

"You say that 'cause you rite for it Squire," said Seth Twiggs, to poke fun at me.

"It's true I write some about Hookertown, but what I get out of it that I dont write, is worth about five hundred dollars a year to me; and I guess this town is worth ten thousand dollars more in solid cash for the ideas they have got out of the *Agriculturist.*

"Judd's a hull team!" ejaculated Twiggs, as he knocked his pipe on the round of his chair, with an emphasis that sent the bowl spinning half way across the room, "and if that paper hasn't got a half a dozen big horses hitched on on to it, as strong as Pennsylvania roadsters, and as fast as yer Morgans, then I'm no judge of what's in it. You'r a bennyfacter, Squire Bunker, for getting me and so many to read that paper."

Well, I guess they'll all find it out by and by. Just look of Dea. Smith's new underdrained ten acre field, where he harvested forty bushels of wheat to the acre this Summer. Look of Seth Twiggs garden with the tile in, and subsoiled. He raises a hundred dollars worth of stuff where he used to raise less than twenty. Look of Jake Frink's new watering trough in his yard, and Uncle Jotham's drained musk-rat swamp, and new barn cellar; and, to cap all, my reclaimed salt marsh cutting three tun of hay to the acre. I made two thousand dollars by that operation and I might have thunk, and thunk my brains out, and I never should have thought of that, if it had not been for the paper. Improvements are going on all over the town, and it is because they read the *Agriculturist.* All the way up to Shadtown, I can tell just what farmers read it by the looks of the farms and buildings. You see then, my recipe for getting rich by farming is, to take the paper, read and digest inwardly, and apply outwardly.

Yours to command,
TIMOTHY BUNKER ESQ.

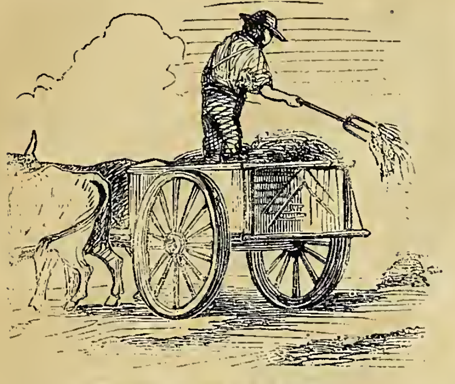
Hookertown, Oct., 1860.

Deep Plowing—Opposite Results.

Wm. D. Shelden, of Wayne Co., gives in the Rural New-Yorker the result of two experiments in subsoiling. He purchased a farm a few years ago, that had been worn out by shallow plowing. The first year he sowed five acres to oats, upon a ridge which had a gravelly hard pan some six inches below the surface; he plowed shallow and the crop was hardly worth cutting. The next year he used the Michigan Double Subsoil Plow, running it ten inches deep, which brought up some four inches of hard pan. The oats on an average were four and a half feet high—a very large growth. Another lot on the same place, on a flat, he plowed about a foot deep. The soil was a black sand. The result was the reverse of the above—it nearly spoiled the land.

There is goodness, like wild honey, hived in many strange nooks and corners of the earth.

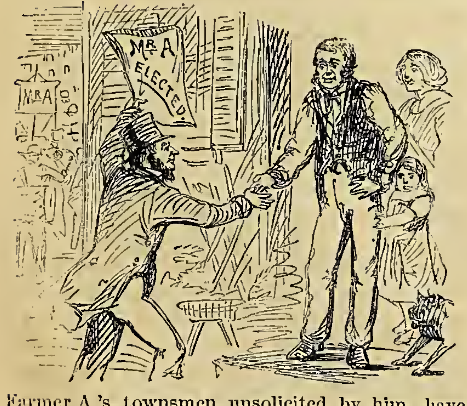
AGRICULTURE VERSUS POLITICS.



Farmer A. enriches his farm.

Farmer A. is too busy to attend the political meeting

Farmer A. on election day, having voted, gathers his noble crop of potatoes.



Farmer A.'s townsmen, unsolicited by him, have elected him to the Legislature, and come to offer their congratulations.

Mr. B. discovers a "crisis" in the country.

Mr. B., having secured the nomination for Assemblyman, harangues his fellow citizens.

VOTE FOR Mr B.

Mr. B. is very busy on election day.

Mr. B., having been elected to stay at home, finds his potato crop not worth digging.

The "Politics" of the *Agriculturist* are pretty clearly set forth in the above hasty sketches, prepared by our humorous artist, which will not be deemed out of place now when almost everybody's attention is called to such subjects. Our *creed*, expressed in due form, might be stated thus: We believe in heavy manuring, in seasonable and thorough cultivation, in large potatoes and plenty of them, with other crops to match. We believe that the industrious pursuit of an enlightened husbandry will conduce to the prosperity of the country, and that *those who manage their own business succcssfully, can be most safely entrusted with public concerns.* We don't believe it pays a man to neglect his private business to seek an office, and we wish, as the artist has indicated above, that such characters might be elected to stay at home, and that good men and true might be selected for places of trust. Not that a knowledge of public affairs should be neglected. It is the right and duty of every American citizen to watch the doings of his government, to study the principles on which it should be administered, and to vote understandingly and in accordance with his convictions.

*

Maine Lands not worn Out.

A subscriber writing from Cumberland Co., Me., says. "Here where I am writing, only 38 miles northwest from Portland, we have 25 to 30 bushels of wheat raised on a single acre in many instances this year, and this, upon our *old lands* which were supposed to have been pretty much exhausted of their wheat-bearing properties. Within a circle of one mile from my house, containing about 20 farmers of moderate, and several of them of quite small means, it is estimated there are not much less than 2000 bushels of wheat raised the present season. This is not much in a wheat growing country, but "Down East" where for the last 25 years we have had to look westward for nearly all our flour, we think it is something for self gratulation, especially when we believe it is principally owing to improved methods of cultivation, increased quantities of good muck manure, and the general diffusion of scientific knowledge pertaining to farming."

["Old lands" are not like old horses, which must inevitably become useless; feed them properly, and they will retain their strength. Happily for the country, this is being discovered and acted upon, though to a less extent than we hope to see at no distant day.—Ed.]

Agricultural Progress of California.—Up to the year 1854, California imported the greater part of her breadstuffs: now, enough is grown not only to satisfy the home demand, but large shipments are annually made to Australia, Chili, and even to New-York! A Chilian reports that the flour of California is sold at Valparaiso cheaper than the native produce, notwithstanding that in Chili, farm labor is worth but eighteen cents a day, and the country has been settled by the whites for two hundred years.

Plowing in Wheat and Manure.—The following method of plowing in Wheat, which has been practised for twenty years by a farmer near Dundas, C. W., is given in the Genesee Farmer. After the land has been prepared in the ordinary manner, manure is spread on the surface early in September, the wheat sown on immediately and both harrowed once over. The wheat and manure are then plowed under together. The wheat so put in has invariably yielded one third more than that sown in the usual manner the same year, and though it takes a longer time to make its appearance, it is never winter-killed, nor is it later in ripening.

Spaying a Mare.

Dr. Dadd, V. S., just informs us that he has recently performed the novel operation of spaying a mare, (removing the ovaries). The mare was six years old, and belonged to Charles H. Ballard, of Hartford, Vt. We believe this is the first case of the kind in this country, if indeed it is not the first one ever tried, and Mr. Ballard is entitled to much credit for offering so valuable an animal for the benefit of science, as it has been generally supposed that an operation of the kind would prove fatal. The animal was under the influence of sulphuric ether, and the operation proves entirely successful, ten days having elapsed since it was performed. The object to be attained in this particular case, was to render the mare more docile, as she had heretofore been nearly unmanageable during her periods of heat. Physiologists are of opinion that removing the ovaries, if successfully performed, will render the animal mild and gentle.

Save the Leaves.

If Bro. Jonathan were as saving of manures, as John Bull is, he would be a better farmer. No one knows until he has seen it, how careful English and European farmers and gardeners are of everything which can be converted into manure. And this is one ground of their superiority in agriculture.

Now, let us repeat, what we have often said, that few things are more valuable for fertilizing purposes than decayed leaves. They are hardly inferior to barn-yard manure. Gather them up, now, this very month of November, before they are covered by the snow. They are abundant everywhere, lying in heaps and windrows in the forest and by the roadside, and by the fences in every yard. The wood-lot should not be stripped clean of them; but doubtless every farmer's land contains more of them here and there, than he can find time to cart home. Gather them up, by raking, or by sweeping with a large birch broom. Stack them and pack them in the large wagon, adding side-boards as high as convenient: you will hardly get too heavy a load. Cart them home, and use them as bedding for cattle and horses; use them for compost in the stable-yard; use them to protect tender grape vines and shrubs and plants in Winter. Strawberry patches will fairly sing for joy under such a feathery blanket. By all means, save the leaves, and use them.

A Leak in the Stable.

Not a leak in the roof, though that would be bad, but in the floor, which is worse, and many leaks too, leaks between every plank! Why should this be allowed? Why not make the floor tight as possible, and have one gutter near the heels of the stock, to carry off the urine into a tank below, or into a heap of muck or other absorbent? Or, in place of this arrangement, have the floors well covered with litter, of straw, peat, tan-bark, saw-dust, plaster, or any dry absorbent material. Any body can see that this would save nearly all the urine for useful purposes, and would make the air of the stables pleasant and healthful to the stock and their owners.

The importance of this economy will appear when we reflect that the liquid voidings of a cow range from nine hundred to twelve hundred gallons a year, according to the age and size of the animal; and of a horse, from eleven to fourteen hundred gallons, which are worth more, pound for pound, than the solid excrements.

As we have often said, the Chinese, and Germans, and other European farmers, save this portion of their manure with far greater care than we do. They would as soon let silver coins slip through holes in their pockets, as this manure leak through holes in their stable floors. Doubtless, American farmers waste millions of dollars annually in this way. Friendly reader, how much do *you* waste?

Treatment of Muck in the Stable and Afterwards.

Of all methods of using muck, which we have tried, we are best pleased with it as an article of bedding for cattle. This, we think the best and most rapid way of manufacturing it into manure. In addition to the liquid manure and a portion of the solid which it receives, it has the heat of the animal while lying down, and this, with well fed cattle is a large part of the time. It has all the qualities of a good bed, dryness, softness, cleanliness, until it becomes saturated with urine, when it is time to throw it out, and put in a new charge. An allowance of a half cord to the animal, will become saturated in about two weeks, if the stall be occupied all the while.

A correspondent asks if the muck should be taken from the stable to the compost heap, or to the field, for plowing in? Either is a safe practice. We are governed entirely by circumstances, in the disposition of the muck after it leaves the stable. In the Spring, during the planting season, we fork it over, make it as fine as possible, and plow it in. Nothing is lost by this method. If not wanted for immediate use, we remove it with the solid droppings of the cattle to the compost heap, where we mix it with two or three times its bulk of muck or peat. It undergoes fermentation, and becomes a more valuable manure, we have no doubt, than that taken directly from the stables. The ammonia is more equally distributed through the mass, there is more of it, and it is in a much finer condition. But the labor of handling is considerable. Which ever course is pursued, we always think money is made about as fast as a farmer can expect, when he is handling muck. We are confident the man who follows it up ten years, will come to the same conclusion. *

Choice of Cattle for Feeding.

THE HEAD AN INDEX OF THE QUALITY OF AN ANIMAL.

Fattening an ox, and building a barn, are two very different operations—depending on principles entirely dissimilar. Some by their practice appear to think that they are quite alike. There is the ready framed timber—the carcass of the animal—to be increased in size. Hay, grain and roots are the materials to be added. All that is needed is to introduce food, let it be worked over in the animal's mouth and stomach, and the building will be completed—just as one would deliver to the carpenter so many timbers, boards, and shingles, and in due time find his barn finished. But it quite often happens that though grass and grain, hay and meal, are given without stint, the expected plumpness fails to appear; and instead of rich juicy cuts of beef, packed under a sleek mellow hide, there results, a coarse, ill-favored, leggy non-descript, with bones like a mastodon, and gristle and hide like a rhinoceros.

Now the carpenter has just one thing to accomplish, and his tools are fitted for it, and therefore we employ him with a reasonable certainty that his work will be done; but an ox carries on more than one trade. He not only makes beef, but bones and gristle, and hide; besides which, he uses up not a little food on his own private account for keeping warm, and also keeping up his spirits, that he may indulge his wild vagaries of frisking and restless roaming, and exercising his horns on the neighboring fences and his owner's patience at the same time. Some animals excel in one of these departments, some in another.

One contentedly chews his cud, while another is seeking mischief; one turns his food to fat, another can produce little but bone and muscle. It would be nonsense to give materials for the barn to the wheelwright or the cabinet maker, and it is no better judgment to select animals for fattening without reference to their aptitude for that purpose. All beef is made from cattle, but all cattle will not make beef, and it is a waste of money to feed grain to *bone-mills.*

These ideas were suggested by the following valuable hints on choice of animals for fattening, contributed by Mr. Hedley, to the Newcastle Club, and published in the Agricultural Gazette, England. He says: "In my close identification with fat cattle for several years, I have always found that the best animals have the most massive heads, most capacious chests, and strongest spines. I have, therefore, evolved a few rules to go by in the purchase of lean ones, and scarcely with one exception I have found them to be applicable. The *head* of any of our bovine races ought to have the first consideration; this is the true index to the vital acumen, and even bodily construction, and will be found to foreshadow all of good or bad that may be accomplished. Thus an animal possessed of a broad, full, spacious skull, with strong evenly-bent deflective horns, will be found to have a thick neck at the base, wide thorax, and strong nervous system; while one with long, narrow, contracted skull, and puny, abruptly bent horns, will be characterised by weakness, wildness, and slowness to fatten. A small, dull, sunken eye betokens hardness of touch and inaptitude to fatten; and a bright, large, open soft eye, *vice versa.* A starting, dark, fiery eye often accompanies a small forehead and hereditary wildness, and when combined with small drooping horns, and a chin with no loose skin hanging from it, is a very despicable animal indeed, weak in constitution, predisposed to lung disease, and sterile in fattening propensities. Animals with weakly-formed heads, have always small loins, and the width of these parts will always be found in an exact ratio with the strength of the head. The nose, instead of being long and fine, as Virgil, Aristotle, and several other naturalists recommend it, ought in my opinion to be thick, strong, and near the ear as possible, if only in proportion to the size of the frame. Thickness of nose and thickness of chest are often twins, and so are thin, meagre, irregular noses and consumption. Small, snipy noses oft sniff the air into frames of small capacities, and are joined to mouths that can crop but very small morsels at a time. These observations I have found to be applicable to any of the kinds of cattle shown at Newcastle market. But besides the shapes of animals, the age and class must always have especial consideration, and be adapted according to food and situation; otherwise, the realization of remunerative profits will be uncertain."

Economy of Food in Stall Feeding.

How to fatten cheapest? that is the question. Fitting an animal for the butcher, is an art that can only be learned by study and practice. Fifteen, twenty, twenty five per cent in the value of food may be saved by the man who knows *how.* The question of economical fattening includes several others: the quantity of food to be given at a time; variety of food; regularity of feeding; cooking food; warmth and quiet of the stalls, and other items. Multitudes who have animals to fatten, have never conducted any experiments to satisfy themselves upon these points, and have no access to reliable information. So each man feeds what is most convenient, and in the manner most convenient, and never can tell whether he has gained or lost by the animal he sells to the butcher. To answer several inquiries we offer some hints upon these topics.

The preparation of food is a matter of very great importance. Stalks, hay, roots, grain, etc., do not impart all their nutritive qualities unless they are artificially prepared. Much is fouled so that the animal will not eat it, and much more is imperfectly masticated so that it is not digested and assimilated. It should be so prepared that the animal can have all the nourishment with the least expenditure of muscular energy. The less trouble fattening animals have, the better for their thrift. The ox, in a poor pasture, will not thrive as in a stall upon green, cut grass, though he consume, in each case, the same quantity of food. The sheep will not thrive upon whole roots and grain, as when they are cut and ground. The pig does better upon meal, than upon corn, and better still if the meal be softened and swelled by cooking. All food should be given to fattening animals in such a state that they may fill their stomachs and give themselves up to rest, and rumination, if they belong to the ruminants. If a farmer is to fatten animals, it will pay him abundantly to invest in cutting machines for hay, stalks, and roots, and in a boiler, and steam box.

Stalks and rough corn fodder are generally more than half wasted, as usually fed. Run them through a cutter,and steam them an hour or two, with a little meal, and they will be eaten up clean. Straw, roots, and meal are much better after steaming, and more highly relished.

Full feeding is another item of great importance in fattening. The object is not to get labor or milk, but the greatest amount of flesh and fat possible for the quantity of food consumed. The animal, therefore, should have all the food he will eat up clean, and be stimulated to eat at frequent intervals, from three to five times a day, according to circumstances. The bullock that is stuffed one day and starved the next, may have the desired streak of fat and lean, but he will be a very expensive animal.

A variety of food is essential to keep up the appetite under full feeding. Even the pig will tire of but one thing. In fattening, we want both bulk and aliment in the fodder. If there be stalks, straw, and hay, there should also be meal. If we have roots, we should also have both hay and meal. Perhaps there is nothing better than roots to keep up the appetite. They assist digestion, and keep the bowels open. The beef and mutton of England are very largely made of turnips, beets, and mangel wurzels. A change in some one of the items of food should be made as often as once a week. If we have steamed stalks and meal with sliced turnips one week, change the turnips to carrots or beets the next. The meal and roots being the same, the stalks may be changed for hay, or the hay and roots being the same, Indian meal may be changed for linseed oil meal, or for any kind of grain meal convenient to feed.

Regular hours of feeding is another element of success in fattening stock. This may seem a small matter, but really more depends upon it than on almost any thing else. The most economical pork maker we ever knew, was a blacksmith who always fed his pigs at meal time, and his meals were regulated by the clock. Every body admired his knack at making fat pigs, but every body did not know his secret—feeding by the clock. It is surprising to see how readily an animal forms regular habits. The bullock, the pig, the sheep, looks for the stated allowance as regularly as the clock strikes, and if his wants are systematically met, an improvement in condition is soon manifest. If fed irregularly, they may consume the same amount of food, but they become restless and uneasy. The animal of regular habits, rests or ruminates immediately after eating, and the food is perfectly digested, and turned to flesh and fat.

Quiet should be secured so far as possible, especially during feeding hours. For this reason, stall feeding, where each animal is confined to a small enclosure, is much better than pasturage, or large open yards, where cattle worry each other, and may be intruded upon at any time, by dogs or noisy men and boys. All animals fatten better in the dark than in the open light, a fact difficult to account for, except that they are more quiet in a dark, secluded place.

With these preliminary hints as to the manner of giving food, we come now to the food itself. What shall be given so that the butcher may not be cheated, and we get our pay for the fodder consumed? A farmer must not expect to get the market price for what he feeds to the fatling. If he gets seventy five per cent, he will make money by the *manure*, if he know how to save it. This is the great advantage of stall feeding cattle for the butcher, and if a man has not a use for the manure upon his own land, we doubt if the business can be made to pay. It is considered more than an average thrift, if an ox gains two pounds a day, worth not to exceed sixteen cents. The feed must be less in value than this per day, or the farmer will lose his time and make nothing by the operation. An ox will eat from twenty to thirty pounds of hay, worth half as many cents, or its equivalent in other kinds of provender. An ox would readily eat eight quarts of meal a day, and this alone, in the old States, would be worth the two pounds of beef. It is quite manifest, then, that the manure making is the only thing that will make stall feeding pay in the North and East.

Our climate and soil are so genial, that we have a large list of feeding stuffs which can be grown upon every farm. At the head of these we place Indian corn for fattening purposes. Then we have oats, buckwheat, and rye, the several grasses, apples among the fruits, cabbage, turnips, parsneps, carrots, beets and potatoes. Then if we purchase, we have linseed and cotton seed oil cake, ground into meal—both excellent articles. The following table shows the amount of nutritive matters contained in 1000 parts of several vegetable substances examined in the green state. Wheat 955, Barley 920, Oats 743, Rye 792, Beans 570, Potatoes 260 to 200, Linseed cake 151, Red beet 148, White beet 136, Parsneps 99, Carrots 99, Cabbage 73, Swedish turnip 64, common turnip 42.

This list places potatoes at the head of the roots for feeding purposes, but it is only where potatoes have no ready market as human food, that a farmer can afford to feed them to stock. They will hardly pay for this purpose, at a higher price than twenty cents a bushel. The other roots can be raised at a cost of from six to twelve cents a bushel, and at this price it will do to feed them. It is quite manifest from these hints that stall feeding is a *science* as well as an *art.* No recipe can be given for fattening an ox or cow. The feeder must rely upon his own judgment and then, quite likely, it will be years before he will make money by stall feeding.

An English Feeding Stable.

The Country Gentleman thus describes the feeding stable of Mr. Horsfall, a celebrated dairy farmer in Yorkshire, England: The inside length is 42 feet; outside width 14 ft. 10 in.; back wall of brick, 7½ ft. high; the end walls also of brick, with doors. The front of the building, towards which the roof slopes, is about 6 ft. high, and is composed of six pairs of doors, so that the whole side can be thrown open, if necessary. The roof is of slate, and thatched underneath—a very simple English method of maintaining a more even temperature, and worthy of adoption here. The spaces between the roof timbers are filled with straw, held in place by light strips of wood.

Comforts for Cows.

Now that the cold season is setting in, let the cows, especially the milk-givers, have all needful attention. They should be well housed and well fed. The stables should be just moderately warm, well ventilated, clean, and provided with suitable bedding. Aside from the mere matter of food and drink, the animals should be kept comfortable. This matter can hardly be over-estimated.

Then, as to fodder: part of this, of course, should be straw and hay and corn-stalks; but to expect cows to give much milk on such lean fare, is folly. Favor them with messes of chopped roots, of cut straw, or stalks mixed with meal of some kind. A favorite 'mess' for cattle, with a friend of ours is this: Cut up hay, or straw, or stalks, in pieces not more than an inch, or inch and a half long, put the provender in a tub or tight box, and pour boiling water upon it; then sprinkle on a little salt, and cover the whole with a little bran or meal to keep the steam in. When cold, feed it in messes of a bushel at a time. Good as this is, it should be varied from time to time, for cows like variety, as well as men. Cows should be salted two or three times a week. In mild weather they should range by day in a commodious yard, protected on two sides, at least, by covered sheds. And this yard should have a pen-stock of running water, or a trough kept full from a good pump: the first is the best.

Sorghum Sugar Wanted.—Some idea may be formed of the saving that can be effected, when sorghum sugar becomes a staple, by the following item communicated by Hon. Amos M. Roberts, of Bangor, Me. He states that he has from a West India merchant in Boston, one order amounting to twenty five thousand dollars, for lumber to be sawed for sugar boxes, which are to be shipped to Havana, and then brought back filled with sugar.

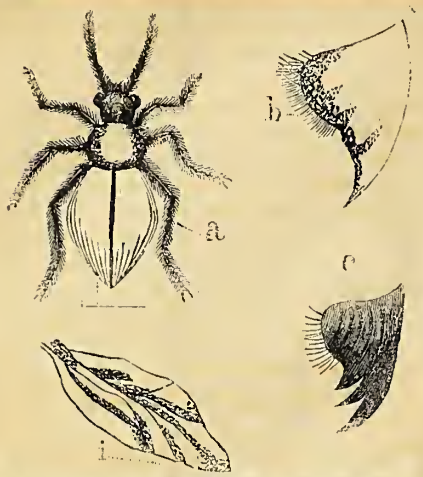


Fig. 1.—*a*, Grape Vine Flea Beetle, (*Altica Chalybea*)—*b*, Mandible covered with skin—*c*, Mandible with the skin removed—*i*, Under wing.

Microscopic Views of the Insect World. VII.

BY MRS. CHARLOTTE TAYLOR.

THE GRAPE VINE FLEA BEETLE.—*Altica Chalybea.*

I here introduce one of the most beautiful of Insects. I presume most grape growers have noticed it glittering like a jewel among the leaves of the grape vine, and have likewise been much annoyed by its depredations. This insect properly belongs to the large wild grape vines of this country, familiarly called "Bullaces," but domesticates itself easily upon every native or foreign vine. It has been believed that the famous Scuppernong was exempt from its attack, owing, I presume, to the extreme acidity of the juice of its buds and leaves; and grafting other varieties on this grape has been recommended. This is evidently a wrong conclusion; this vine at some seasons may be found entirely bare of leaves and buds, and containing this beetle in abundance—not that I mean to say it alone may be considered the depredator, unfortunately it has ample assistance from many other insects. I presume it has been very troublesome in every part of the country for the last two years, from the number of letters calling my attention to it. A drawing of the perfect insect is given at *a*, Fig. 1. It belongs to the sixth family of Latreille's Coleoptera Tetramera; the division Galeruca, and subgenus Altica. It is called the Haltica Chalybea by Illiger (steel blue flea beetle). When it first emerges from the pupa case, it is of a brilliant violet color, but varies as it advances in age, until, if time permits, it becomes of a dark bluish green; but in its palmiest days, it is of the bright metallic steel blue hue which gives it its name Chalybea. If the season is favorable, the first brood generally makes its appearance about the middle of April—the second near the end of July if dry and pleasant—they dislike rain exceedingly.

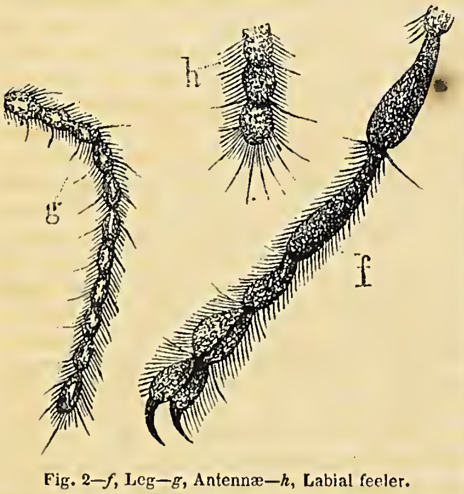


Fig. 2—*f*, Leg—*g*, Antennæ—*h*, Labial feeler.

There is a peculiarity about these beetles which I have not seen noticed by other entomologists, which puzzled me exceedingly at first. I could not allow myself to believe they could commit the depredations they are accused of, but after years of trial and examination, I see that it is with them as with all others—a kind Providence watches over their welfare, that their mission may be successfully fulfilled. When they first come forth an Imago, or perfect insect, there is a skin over the mandibles making them look entire, *b*, Fig. 1. While this skin covers them they require no food, the salivary glands being shielded by this cover, they have no desire to eat; so if the buds of the grape are not forward enough, they can wait patiently until Nature provides them with their supply. When the buds are ready, they commence eating, and soon press through the three teeth in each mandible, which leave no doubt of their ability for mischief, *c*, Fig. 1. You may be convinced of this by breeding them under a glass and submitting the mouth of the Imago to the magnifier immediately on its emerging. The covering is very thin; if there are several under the glass, they will bite at each other, which will force the teeth through; and if not fed immediately, they will die of starvation. You must have some patience about it; a hundred specimens may be examined and yet not one be found in this exact state, as many circumstances intervene to force them into the act of biting. They are great eaters, and consume double their weight every twelve hours. Their principal food is the bud of the grape vine, and they can be seen all the season, burrowing, almost disappearing into the interior, *d*, Fig. 3. Of course the growth of the vine is injured, if not entirely stopped. When more fully advanced, they commence devouring the leaves. The injury done is greater when arrived at the Imago state, than when in the larvæ, *e*, Fig. 4; however, they are destructive enough at all ages. The tarsi (feet) are three jointed; the legs, *f*, Fig. 2 are incrassated, fit for leaping, which is their principal movement, although they fly well for a distance; and they have been known to emigrate in numbers across streams and rivers. When touched, if they do not leap, they fall to the ground and simulate death. The antennæ, *g*, Fig. 2, are filiform. The labial feelers, *h*, Fig. 2, are three jointed, the maxillæ, obtuse, the galea palpiform and distinct; these latter parts can not be shown unless the whole mouth be drawn, which is unnecessary, but must be noticed as distinctions of the subgenus. The underwing, *i*, Fig. 1, is of a delicate amber color shaded with a deeper hue. The female deposits her eggs, *j*, Fig. 3, which are small and bright yellow with an indentation at the side, on the stalk, where the bud will protrude, *k*, Fig. 3. The worm comes forth and burrows down into the cup of the bud, or hides away under the down around it, until it is more advanced. They are very small, scarcely perceptible, a delicate pale green, of the same hue as the young leaves. After eating about fifteen days, it changes its skin, becoming darker. Three times, this ecdysis is performed, when it now becomes, if healthy, of a dark chestnut brown, sometimes more of an Indian red; but much depends in color upon the grape it is feeding upon. When the change of skin is about to take place, the worm draws over it a corner of the leaf, *l*, Fig. 4, to shield it from the sun or dew. It does not come forth to the air for a day or so, until the new skin is hardened. They generally feed six weeks and then go into pupæ.

The pupa state is necromorphous — that is, the mouth and legs are detached from the body, but so enveloped they can not be used, therefore the resemblance to the perfect insect is considerable. The first brood appear to be indifferent about the place in which they will undergo their transformation. You may find them in the pupa case, glued to the stem of a leaf, *n*, Fig. 4, or tied up in a tendril, or on the main trunk, hid away under the bark which is always flying off from the stalk of the grape vine. But the second brood is very careful to descend to the earth, and there, around the root of the vine, you will find them congregated in regular formed pupæ cases of the size of a caraway seed.

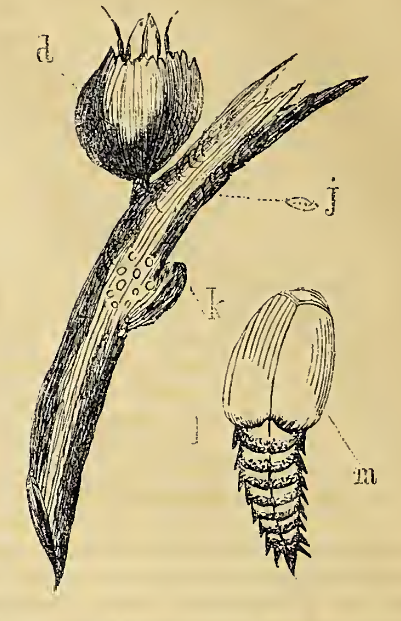


Fig. 3- *d*, Beetle in the grape bud—*j*, The egg—*k*, Place of depositing the egg—*m*, Pupa case.

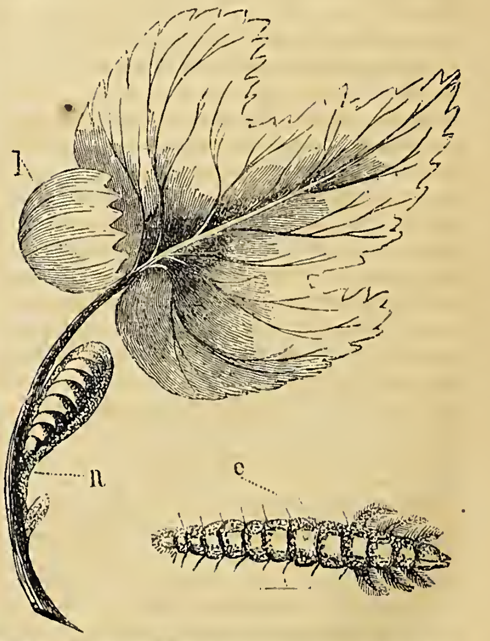


Fig. 4—*e*, Larva—*l*, Place of concealment when changing the skin—*n*, Pupa case, glued to a stem (magnified) the natural size is given below.

It must strike any intelligent mind that the remedy here is to remove the earth from around the vine, replacing it with earth well *sifted*. You would be amazed to find how many injurious insects you would destroy by adopting this plan. Using bullocks' blood diluted with water, frequently keeps a grape vine free from many insects, not from much benefit arising from the blood, but that the smell of it attracts the larvæ of carnivorous beetles, which devour the pupæ of the herbivorous. Is there nothing that can be said or written, that will induce people to undertake the destruction of injurious insects in the Autumn? This is *the time* to remove such evils around fruit trees and in gardens, not waiting until the Spring with its genial warmth brings them forth from their hiding places—when the washing, dusting, hanging of bottles, thrashing of branches, mixing of oil and soap suds—grumbling, lamenting, and inventing patent powders and recipes, commence. How much wiser to use the spade in the Autumn.

Mother Earth in her bosom shields
Her children of the woods and fields.
Here you will seek them if you're wise
'Ere sweet Spring gives them wings to rise.

Habits of the Apple Borer.

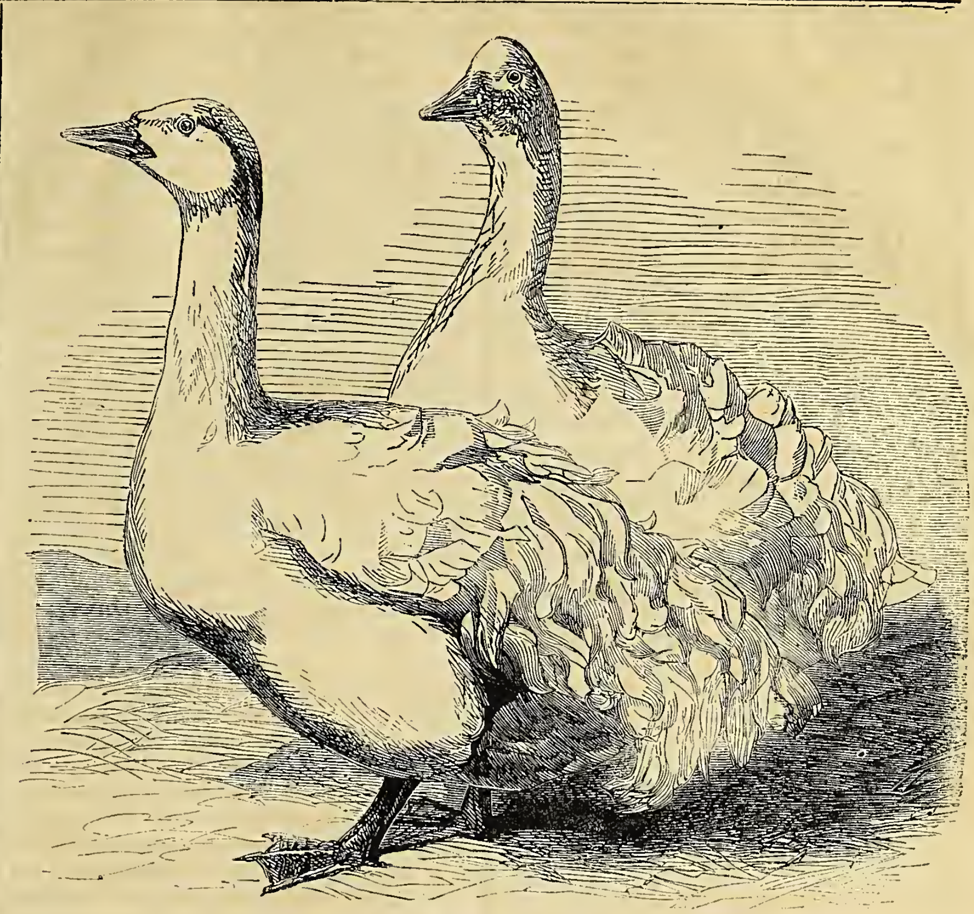
A correspondent of the Maine Farmer, who has paid much attention to this destructive insect, states as the results of his observations: that the absence of the sawdust or borings about the trunk of the tree is no proof of the absence of the borer; that the borer works downward, sideways, or round about, the second year, working very close to the bark and girdling the tree so far as he goes, and it is not until after the second year that he makes a straight course upward and inward, to come out, probably on the other side; that there are often several borers in the same burrow, at least during the first and second years; and that it is better to kill the tree in searching for them with the knife and the chisel, than not to find them.

It may be that our readers will feel *bored* by seeing so much about this insect in the *Agriculturist;* but it is proving so destructive, that too much can hardly be said until cultivators are induced to stop its ravages.

Teaching Pigs to Eat slow.

A correspondent of the New-England Farmer says: Pigs should be early taught to eat slowly, for the advantage of the pig, as well as of the owner. Nothing is easier. Give the weaned pig, at 6 or 8 weeks old—in a clean trough—half a tea cup of dry shorts or bran, and after his dry food is all eaten, give his drink, and increase the dry food according to the age and appetite, till three months old; then add one half Indian meal for two months, and then dry Indian meal, till fattened sufficiently. This plan has been followed for five years with decided success.

A Crow Frightener.—A foreign journal notices an ingenious contrivance for keeping crows from the cornfield, in operation on a neighboring farm. It is a self acting gun, which being loaded in the morning continues to shoot at certain intervals during the day. It is so made that it can be set to discharge itself once in ten or fifteen minutes, or half an hour, or longer, as may be desired. Can not some of our Yankee readers get up a cheap contrivance of this kind during the Winter? If they can arrange it so as to *kill* the crows, we will warrant an extensive sale.



SEBASTOPOL GEESE.

A New Breed of Geese.

The above engraving gives a very good idea of a curiosity in the poultry line, recently exhibited at the Crystal Palace in London, viz: a pair of geese obtained in Sebastopol, Russia. They are described as being somewhat smaller than the common variety, weighing eleven pounds each, but of the purest white, and most perfect form. The most noticeable feature of these birds, is their curly plumage, which gives them a very singular look, making them appear almost as if of a distinct species of the goose family. The feathers on the back are curved and frilled upward; the secondary or smaller feathers of the wings are elongated and twisted; the tail coverts have also the same peculiarity. Their habits are precisely similar to those of the common goose. But one pair have been taken to England, and we have not learned what is their value for the table. Perhaps the curly nature of the feathers makes them more elastic and better for beds. At present they are regarded only as "fancy fowls," for gratifying the curiosity of those interested in poultry breeding.

For the American Agriculturist.

What Agricultural Literature has Done.

A TRUE HISTORY.—AND NOT A FANCY SKETCH MERELY "FOUNDED ON FACT."

Twenty five years ago, I was a boy of twelve, living near one of the richest valley farms in the interior of a New-England State. The farm comprised about three hundred acres, of which seventy five were strong alluvial soil, in meadow, flooded by the high waters of every Spring—one hundred more in upland pasture and arable land, and the balance in woodland. The occupant's family consisted of a son and two sisters, the elder of whom was the housekeeper. The "help" was a hired girl and a man, with an additional hand, and sometimes two in haying. Here he spent his life in a fruitless attempt to support his family and educate his children. He was an industrious, a hard working, frugal man, who taught his children habits of the strictest economy: but he was an *anti-book* farmer, and a patron of the credit system. The merchant, the blacksmith, the wheelwright, every one with whom he had dealings, had accounts, the balances of which were all on the wrong side, and somehow, could never be reduced. Too often, they were closed out by legal process, and I well recollect that the sheriff was the most frequent, though unwelcome visitor. The plows had the old wooden moldboards, faced with strap iron; the harrow teeth were made of white oak; a horse rake we had never seen. The fences were rickety, the buildings dilapidated. There was an orchard, but the knowledge of fruit culture did not teach that it ever required *trimming*, and its productions were about as large and hard as nutmegs. As the meadows lay convenient to the barns, they were fed down closely in Autumn—the feed was better there than in the pastures! The cattle were never stabled in Winter, nor were racks provided in which to feed them, and the quantity of forage they wasted equaled that which they consumed. The stock died in Winter of exposure, in Spring of weakness. The crows always called in their early Spring migrations, and were always sure of an abundance of animal food. The manure was rarely disturbed in the cattle yards, because the meadows were thought to be rich enough without it, and it would not *pay* to draw it up hill to the pasture lands. It went on accumulating until the yards were higher than the surrounding fields. The wash of the yards was conveniently disposed of in a neighboring brook, toward which the yards sloped and by which they were effectively drained. It was the boast of our neighbor that *his* cattle yards were always *dry*.

Under such circumstances "going to college" was out of the question for the son. It was only through much tribulation, that he could attend for two terms at the village academy. His sisters must be content with the facilities for "reading, writing, and ciphering" afforded by the district school.

On this farm, in those days, an agricultural paper, book, or periodical was never seen. The father entertained a sovereign contempt for the book farming which one or two of his neighbors were beginning stealthily to practice. With him, a change of crops consisted in breaking up the meadow, planting it to corn or potatoes, without manure, the first year, and sowing it with oats and a sprinkling of grass seed the next. This sometimes "caught," as it was termed, but oftener not, but it was the "mowing" next year in either event. The idea of applying chemical knowledge to the adaptation of different manures, would have been regarded as a humbug, and the man who should have predicted modern plows, harrows, cultivators, threshing machines, *reapers and mowers*, would have been treated in that neighborhood with the pity and consideration due to an insane person.

The consequences were inevitable; with each year the ends were further from meeting than the year before. Then the pine, oak, and other valuable timber, and finally the cord wood, were cut off to satisfy an old creditor, while making a new one. As the son grew older, he became dissatisfied, broke away from the old homestead, and after encountering the difficulties common to such efforts, obtained an education without paternal aid, studied a profession, and settled in the practice of it in the county town of his native county.

Pass over a score of years, with their changes. The father has gone to his rest. In the family arrangement the homestead passed into the possession of the husband of my elder sister, who has now occupied it some 8 or 10 years, and has had *no* income except that derived from the products of the farm itself.

There is a change there now. In the place of the old, ruinous dwelling, is a large commodious frame house, with its neat vine clad porticos, its shades and blinds, and all the "modern improvements." The parlor has its piano, and with the other rooms, is finished in a style of substantial elegance. Young shade trees are springing up around the lawn in front of it—a neat flower garden is laid out at one side with a vegetable garden in the rear—young trees are putting forth vigorous shoots, giving promise of abundant fruit of various descriptions.

All the old out buildings are torn down, new ones are erected in rear of the house upon a gentle slope which overlooks the meadow. Here are warm stables in which water scarcely freezes during the Winter, for every head of live stock upon the farm. The floors are so constructed as to save all the drippings, and the manure is housed as carefully as the stock. Not a pound of hay or an ounce of grain is fed outside of the stables. The straw, stalks, and coarse fodder are all cut and mixed with grain, which is always ground before it is fed out; in this manner not a straw is wasted. Running water is carried into and out of every yard.

Are you curious to look at the stock? Here is a flock of long, coarse wooled, heavy sheep. "Leicesters," I think he calls them, to begin with. "Is not this wool very coarse?" you ask, as one of the long bodied, heavy quartered, Landseer like looking animals nibbles at the owner's hand. "Rather," he replies, but at 30 cents per pound it brings as much money as that of so many Spanish Merinos—and he goes on to tell you how it costs no more to keep them, than the little Merinos; that the ewe almost invariably produces two lambs each year, that they are very hardy, come early to maturity, and that the Boston lovers of good mutton are quite willing to give ten dollars for the carcase of a fat two year old, when common mutton could hardly be given away. Then, here are his cattle—all selected with a careful eye to their destined uses. Here are pure bloods. Herefords, Devons, Alderneys, and Durhams. Some for beef, some for their milking qualities, some for draft oxen. After repeated experiments, he tells you that he has concluded to keep no pigs but those of the Suffolk breed, as they make pork the cheapest. We look at a pen of them—there is scarcely a greater difference between a greyhound and a porpoise, than between these and the long legged, gaunt species, that used to range at will over the potato and corn fields, twenty years ago. He does not approve of the mania now prevailing for horses; he thinks that in the Black Hawk now so popular, size and strength are sacrificed to beauty and action: and just to see whether this error can not be corrected, here in a box stall, is a colt by old Black Hawk out of a Hamiltonian mare. He thinks that he has improved by this cross on both the parent stocks, and you agree with him, as you look over the beautiful animal which he shows you. Indeed you are almost ready to say that there is no room for improvement in his stock. He thinks differently—and you will, if you look over his farm ten years hence.

Come now into his fields. Here he will utterly confound you. He is thoroughly versed in the mysteries of agricultural chemistry—start him once upon alkalies and acids—phosphates and super-phosphates, silica and alumina, and he becomes so abstruse and scientific, that you are at once reminded of the frightful formulas of Prof. Horsford about chrome alum and its salts, which you and I tried so unavailingly to understand at the scientific convention at Newport. And yet there is a singular method in all he says. This field produced nothing! It wanted lime. Lime was furnished, and the corn crop he thinks is sixty bushels to the acre. That one was short of ammonia—ammonia was supplied, and the change is even greater. But I will not particularize further. Here are the hills, the brooks, the old trees, each of which is endeared to me by some association of childhood, but all else is changed. The wilderness has been made to blossom like the rose.

What are the nett results? Upon the farm on which the father grew poor, the son-in-law lives like a country gentleman. His young lady daughters are at the Seminary. Instead of a borrower he is a lender—each year adds to his stock list, and his note roll. Out of debt, with a farm and stock worth ten thousand dollars, living comfortably and elegantly, discharging his duties toward society and his family, he occupies a position of happy independence which a professional man can never hope to attain.

What is the secret of this change? Go into his library and you will see the explanation! He is at the same time a *practical* and a *scientific* farmer. Books and papers, those garners of the experiences of other men, are, in part, the *tools* with which he works. These, teach him what improvements are really valuable and he adopts them. The best investments he makes are in agricultural literature. He will tell you how an article which taught him to set his fence posts with the tops downward, and gave the reason why he should do so, has doubled the length of time that his post and board fences are serviceable, with various other illustrations not less curious. Books upon chemistry, meteorology, manures, upon horses, cattle and sheep, fruit and horticulture and all kindred subjects, with all the approved periodicals, (to many of which he contributes) you will find there—all giving evidence of the thorough reading to which they have been subjected. On the whole, I pronounce his establishment the best cure I have ever seen for the malady which affects too many of our farmers still, called "*prejudice against book farming.*" BION.

Making the Best Cider.

To make good cider, the apples for each pressing should be as nearly as possible of one kind, free from rot, leaves, and all foreign substances, that the fermentation may be complete and uniform. Apples should be selected, the juice of which has the greatest specific gravity, as such juice contains the most sugar, and makes the richest cider. They should be ground and pressed with scrupulous cleanliness, and every step of the process, from the gathering of the fruit to the final barreling and bottling the liquor, should be conducted in the same careful and unexceptional manner.

Apples differ not only in their flavor, color, and time of ripening, but in the proportions of their constituent parts. The characteristics of a good cider apple are: a red skin, yellow, and often tough and fibrous pulp, astringency, dryness and ripeness at the cider making season. When the rind or pulp is green, the cider will be thin, weak and colorless; and when these are deeply tinged with yellow, it will almost always possess color, with neither strength nor richness. The apple, like the grape, must attain perfect maturity before its juices develop all its excellence; and, as many of our best eating apples do not acquire this maturity until Winter or Spring, such fruit seldom yields good cider. In a dry apple, the essential elements in cider are generally more concentrated, or are accompanied with a less proportion of water, than in a juicy one; of course, the liquor of the former is stronger than that of the latter. Of our best cider apples, from ten to twelve bushels of fruit are required for a barrel of cider, while of the ordinary juicy kinds, eight bushels generally suffice.

The apples should ripen upon the tree, be gathered when dry, spread in an airy covered situation for a time, to induce any evaporation of aqueous matter, which will increase the strength and flavor of the liquor; and finally they should be separated from rotten fruit and every kind of filth before they are ground.

The apples should be reduced by a mill to a uniform mass; to give it color, the pomace may be exposed to the air from twelve to twenty four hours till it becomes red; then press out the juice slowly; put it in casks; bung it up and immediately place it in the cellar, leaving out the bung. Fill up the cask to the bung, in order to let the impurities flow over. Before the fermentation ceases, insert a flexible tube through the bung, block tin will answer, and bend the other end, like a syphon, into a cup of cider, or water placed on the cask near the bung, to allow the carbonic acid gas to escape, and to prevent the air from entering. So soon as the gas ceases bubbling through the water in the cup, the fermentation is complete; then draw off into clean casks, bung tight, and place in a cool cellar, where it will continue sweet for any length of time.

The advantage of this process is that the juice is preserved perfectly sweet, and you are more sure to draw it off at the right moment after fermentation ceased. When fermenting, the lighter particles of pomace are rising, the more heavy settling; and the least touch or jar of the cask will disturb the operation. In straining the liquor, too much care can not be taken to exclude the pulp, as its presence is apt to render the fermentation too violent, and drive it into the acetous or vinegar stage. A hair sieve, partly filled with hay or straw, answers the purpose.

Another process—and we think a good one—is to put the liquor, as it comes from the press, into a tub or open vessel, and let it remain till the most active part of the fermentation is over, which will take place in from four to eight days, according to the weather and the heat of the place in which the operation is conducted. A cool dark cellar is the best; cool, that the action may not be accelerated, and dark, to avoid flies and other insects. As soon as fermentation commences, part of the pomace and lighter portions rise to the surface with the disengaged gas, in the form of froth, and the residue or heavier impurities fall to the bottom in the form of sediment. This is a critical moment. When the froth begins to crack, it should be carefully skimmed, and the liquor drawn off into clean, sweet casks. If left longer, the feculent matter or froth parts with the gas, sinks, and renders the liquor turbid, and as soon as the temperature attains a proper hight, the acetous fermentation commences, and vinegar is the result.

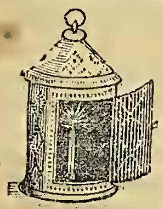
C. N. Bement.

For the American Agriculturist.

Blinks from a Lantern......XXII

BY DIOGENES REDIVIVUS.

ABOUT OUR HOUSES, ETC.



Times have greatly altered since I dwelt in the flesh. It suited my convenience and humor to live in a tub then, to rebuke the extravagance and folly of my times, and to show how little would meet the animal necessities of man. I threw away my drinking cup, taking water in the natural way, to show that the animals were not more independent than man, and that one philosopher, at least, was as capable of self help as common men. I have learned a good many things not dreamed of in my philosophy then. I have found out that man has a soul with an esthetic nature, and that the cravings of a man's stomach are by no means his most imperious wants. He needs things beautiful and comely, for the growth of his soul, just as much as he needs food and drink for his body.

I have sometimes thought, in my journeyings around among the farmers of modern times, that there was a great deal of the old tub philosophy still prevalent. I cannot see wherein a *box* is any better type of architecture than a *tub;* and a box is the model of the great majority of farmers' houses. To my eye, the six parallelogram sides of the box are not so pleasing as the circle of a tub. One would naturally think that all the carpenters in the country had studied nothing but Euclid, and that they could entertain no other proportions. There is a great want of taste in these houses. The architect who contrived them, had no other conception of man, than as an animal with certain physical wants. He must have a cage to feed and roost in, and it might as well be an exact cube as anything else. The cube is only broken in its outline by the roof, because it rains sometimes, and the smoke must go out of the chimney. But for this infelicity of the climate, we should have nothing but the box, pure and simple.

Now, in the necessities of the back-woods, where a man is struggling for the bare necessaries of life, I have nothing to say against the log cabin, and the cheapest and plainest build of dwellings. They are temporary expedients, looking forward to something better. But the box is by no means confined to the frontiers. We have townships settled more than a century ago, where the most of the people live in two story cages. The prevailing model is an unpainted box, the eaves projecting six inches beyond the sides of the house, without a superfluous board, or shingle, or brick, in the whole building. There is nothing pleasing to the eye, nothing but the windows and chimney to distinguish it from a barn.

Beside, the house is but half finished; the walls, if plastered, have neither whitewash nor paper; and the molding and casings have no paint. Men and women take their food sitting in a row on a bench, like pigs at a trough, as if chairs were a very extravagant luxury.

If man is nothing but an animal, as some of my cotemporaries used to argue, this is all well enough. But if he have a soul with longings for the beautiful, this is very bad. It is a necessary part of self culture to develop this esthetic taste. A man's mind necessarily takes the hue of his surroundings. He can improve himself only by improving the objects with which he comes in daily, almost hourly contact. He does not fulfill his destiny by simply providing for his physical necessities. Other things being equal, he is a nobler and better being, more of a man, for all that he does to make his home tasteful and attractive to his children, and his circle of friends.

When one is to build a house, it costs but a trifle more to make it beautiful. Some actually pay a large premium on ugliness. It may as well be in keeping with the surrounding scenery, and fit into its back ground of hill side and woodland, like a gem in its setting, as to be made a botch and eye-sore in the landscape, by its hideous contrast with every thing lovely around it. It may as well stand in the right place, conveniently situated for the farm work, and a little back from the street, as to be thrust into the highway, as if it were a tavern, where everybody was expected to call. Trees are cheap and convenient in all parts of the land, and no adornments are more appropriate to a country home than these. Rows of elms, maples or oaks along the road side, evergreens by the carriage drive that leads to the house, and upon the plot of land in front, are inexpensive ornaments, that will grow beautiful with years.

The barn and other outbuildings may as well be made tasteful. A little outside beauty will not spoil the hay, or make the grain mold in the bin. Paint will not only be appreciated by the passer-by, but will preserve the buildings, and save the expense of repairs.

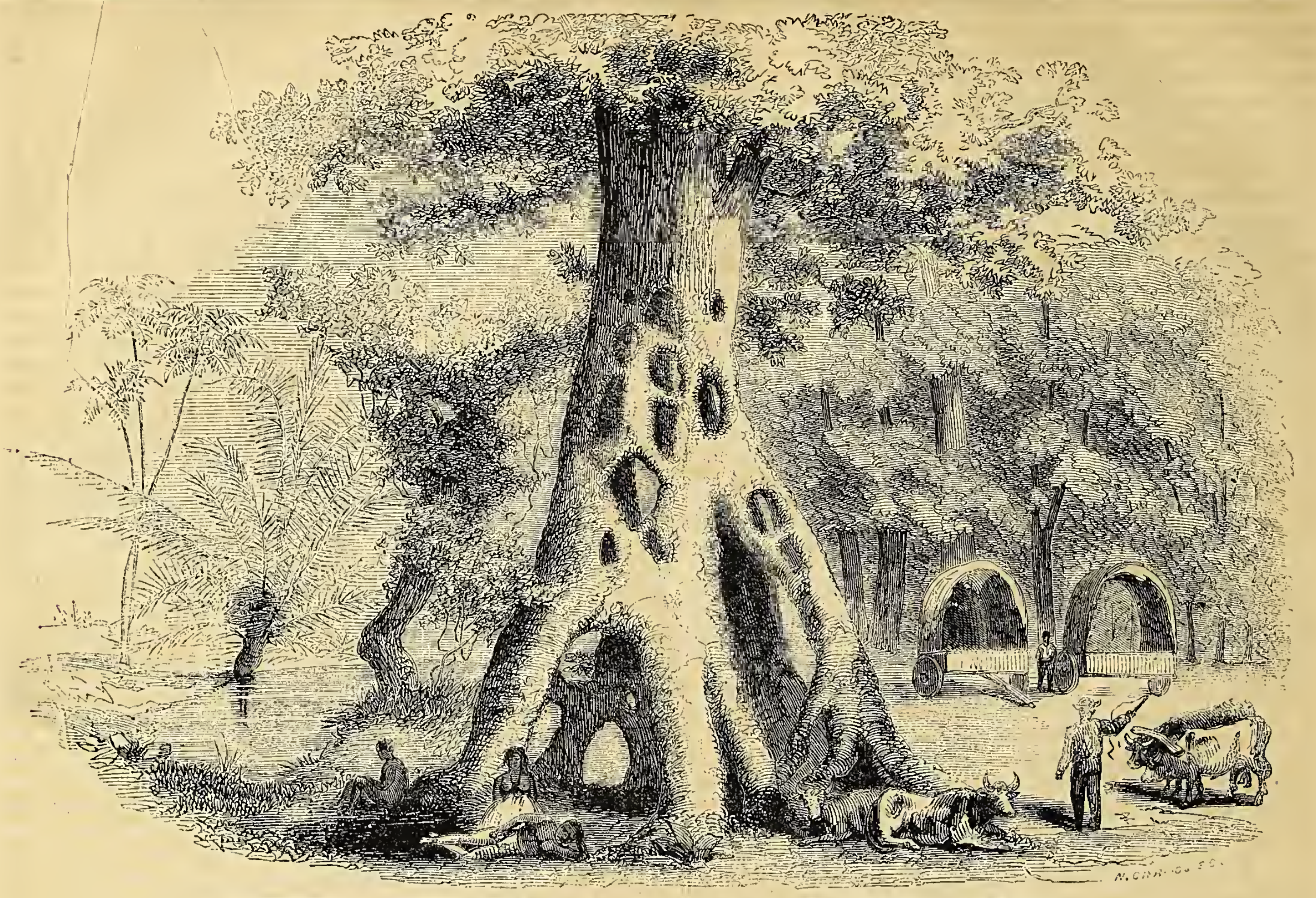
Fruits are quite as nutritious as wheat, corn, and potatoes, and they look a great deal better. An orchard, a fruit yard, should be the chief material glory of the farm. Apples, pears, peaches, and plums, are beautiful in their season upon the trees, and hardly less attractive upon the table, furnishing a dessert better than pastry, and not half as expensive. Grapes hanging upon the trellis, in red and purple clusters, are cheap engravings, with which every farmer may adorn the outlook from his window.

Nothing is more ornamental than improved stock. A horse worthy of the name costs no more to keep, than the spavined jade that makes one ashamed to ride after him. He can be raised as easily, will go much faster, and if you want to sell him, he will bring a much better price. A yoke of grade Devons, red, sleek, and plump, a perpetual feast to the eyes in their elastic step and graceful activity, will cost no more to raise than the ungainly, slow molded creatures that now move about the farm.

The boys and girls that are growing up under your influence, love these beautiful things, and can not help it. They were made to love them, and if they can not have them and enjoy them at home, they will seek them elsewhere, as soon as they are able. The world moves outside of the farm, if not upon it. The farmer can no longer keep his children confined to the narrow circle of his own home, and parish. The locomotive has thrust its iron nose into his seclusion, and the children will see the world before they reach their majority. They will see objects of taste elsewhere, and long to possess them. If the farmer wishes to save them for his own house, or for rural life in his neighborhood, when they come to marry and settle, he must show them upon his own premises that farm life does not necessarily dwarf one's esthetic nature, that the farmer can till the soil, and adorn it, and make his home as comfortable and attractive as that of the citizen. This problem solved, it will be no longer difficult to retain the young upon the farm. It will be a hardship to leave home, and try their fortune in the city.

When to Cut Timber.

Conversing with an intelligent farmer of large experience, upon this subject, we found he fully sustained the views heretofore expressed in the *Agriculturist*, viz.: that the best season for cutting timber is about mid-summer. His explanation was, that during the latter part of June and early in July, when the foliage is in its fullest vigor, the upward *draft* upon the sap is so great that very little moisture is left in the tree, consequently the timber seasons hard and sound; but that during March and April there is so much water in the wood, that insects bore into it readily, thus producing "powder post" through all the sap portion, and even into the heart wood. He mentioned the instance of a neighbor who cut his timber for a house in June, but when he came to work it out in the Winter, he lacked some ribs or slats upon which to nail the long roof shingles. He cut enough to supply the deficiency during the latter part of Winter, and completed the house. After the lapse of a few years, he examined the roof, and found the slats which were cut in Summer, perfectly sound, while those cut in Winter, were badly affected by dry rot and "powder post." Our informant had also proved the same thing himself. He also remarked that when the object is to induce a free growth of new shoots for a future wood or forest, he preferred to cut in March, as the stumps sucker much more freely then, than when cut away in Summer. The latter, however, is the best season to clear off a growth of wood; the old stumps decay sooner.



A TROPICAL SCENE—THE MATA PALO TREE OF CENTRAL AMERICA.

Drawn from Nature for the American Agriculturist, by A. O. MOORE.

Jottings in Central America.*

BY A. O. MOORE.

Just at break of day, mounted behind the flapping ears of a mule, I emerged from between two rows of palm thatched huts, coming upon the smooth sand of the beach, surf-beaten and hard even beneath the narrow hoofs which bore the burden of myself and baggage.

I was now aroused by a feeling of sudden surprise, to the consciousness that I was really in a foreign land, that these sands were the shores of the Pacific, these trees formed a tropical forest, and that these people of another language and strange customs were indeed the Central Americans, in exploring whose country I proposed to spend a few months.

The bay of Nicoya lay at my right, at the left a tangled mass of trees covered with vines, be hind me the village of Punta Arenas, before me the long white line of the beach on which the curling waves were lazily rolling, and the ruddy glow of the Eastern sky gave to the whole scene a beauty beyond description.

Onward jogged the mule till the solitude was at length broken by overtaking a person afoot, a boy about seventeen, with a cocoanut under each arm and a long knife in the girdle at his back. He politely gave me a salutation, and quickened his pace to keep up with the jog trot of my mule, so I asked "where are you going?" "What is your name?" and such other questions as a rather limited knowledge of Spanish enabled me to address to him. He showed himself very sociably inclined, saying many more things than I could understand. I learned however, that his name was Diego, and that he was going part-way on my route.

Two leagues of my journey were now behind me, and the road entered the forest. Quite an agreeable change, I thought, as my eye glanced along the serpentine track which led into the dark archways of the woods; for the sun from the moment of its first peep above the horizon, shone with an ardor almost equal to our Northern mid-day. Now for the first time I stood within a tropical forest. Every tree, shrub and vine, every leaf were new to me, of a new type and manner of growth; but the first overwhelming sensation of awe precluded all study of details. I made an impatient gesture to Diego to silence his chattering, and gazed upward and around among the gigantic forms, towering, wide-reaching, fantastically twining, densely matted, all on a scale of grandeur beyond anything I had ever seen or imagined. It was as if a new planet had received me; one grander, brighter, nearer the sun, and nearer Heaven than the cold grey orb on which I was born. The very voices of the birds added to the strangeness; one single note loud and clear, as if from an organ pipe broke upon the stillness at long intervals. It may have issued from overhead or half a mile distant, it seemed to fill the whole forest, and was a perfect expression of mournful solitude. The "*carpintero*" or carpenter bird, might call to mind our woodpecker, but with a slower more ponderous stroke did he make the woods reverberate. At another moment some of the parrot tribe would disperse every idea of solitude and silence, filling the air with tones of perpetual quarrel; even their brilliant blue and crimson plumage could not long restrain the wish that they would rid us of their company.

While I was gazing abstractedly into the green dome above, Diego had visited a field beyond the edge of the forest, and now returned with his hands full of nuts and fruits, among which were the juicy Marañon, a singular apple-shaped fruit, with its seed or nut shaped like a Lima bean, growing entirely outside of the fruit; the Mango, of beautiful color and luscious taste, being perhaps the most common fruit in Central America, but it is said to produce the "Calentura" or fever. Upon these and one of Diego's cocoanuts we made a lunch, and then started onward.

We soon reached a mountain stream which flowed swift and clear over its rocky bed; looking a little down the stream, one of the most interesting objects met the view. "*Como se llama aquel arbol grande* (What do you call that large tree) Diego?" I asked. "*Mata Palo*, Senor," he replied. We turned aside to get a nearer view of the tree. A group of "Careteros" with their carts, oxen and families had sought this shady retreat for their midday rest; some were sleeping upon the ground, others feeding to their weary oxen juicy stalks of the sugar cane; but *the tree* absorbed my attention, first by its size, but more especially by its curious appearance. For a hight of forty feet it seemed to be composed of six or eight trunks, which had started from the ground, independently of each other, in a circle of twenty feet or more in diameter

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*[Our friend, A. O. Moore, Esq., whose pencil has contributed to beautify our former volumes, recently returned from a sojourn in Central America, whence he brought many beautiful sketches of the vegetation, modes of cultivation, and appearance of the people, in that tropical clime. Some of these will doubtless greatly interest the readers of the *Agriculturist*. The sketch given in the present number, not only illustrates a very curious specimen of vegetable growth—one quite common there—but also gives some insight into the habits of the people.—ED.]

and becoming then united in one, thenceforth grew as an ordinary tree, all the branches which each may have borne also being interlocked and united as if grafted together. The utter impossibility of such an occurrence left me, in spite of my many questionings of those about me, without explanation of the phenomenon. The engraving opposite is an accurate representation of the scene.

Becoming weary of my useless attempts in this direction, I amused myself by examining the no less curious people and their rude equipages. I found them polite and communicative. They were of a mixed race between the Spaniard and the Indian, speaking the Spanish language, *comfortably* dressed, that is, having the smallest quantity of clothing consistent with their ideas of propriety, and were either barefooted or wore only sandals. Their oxen were large, well shaped, and in good condition; the method of yoking them is universally by the horns and not by the shoulders. The yoke is a piece of wood neatly shaped, resting upon the neck and firmly tied to the horns; to this is fastened the pole of the cart. Whatever may be the comparative merit of the two kinds of yoke, I must say that I have never seen oxen perform such difficult labor, as, for instance, drawing those rude two wheeled carts, loaded heavily, up and down the undressed mountain roads, rough and stony to an extreme, with so little of chafing and lameness. The carts which were loaded with sacks of coffee brought down from the famous "Cafetals" (coffee plantations) of Costa Rica, were of the rudest construction; the wheels formed of the section of a tree, with a hole in the center to receive the axle, and sometimes shod with iron; while a few hides thrown over the bows, formed the cover. Sugar cane forms almost the only food of oxen and mules, and every hut has as its necessary accompaniment, a patch of bright green cane, which, when once planted, continues to yield from the same roots, almost without further labor from fifty to a hundred years. The stalks are prepared by stripping off the hard external coating, and are then nutritious and palatable to the animals and even to man himself. I left these people with a better opinion of their politeness and intelligence than I fear they had of mine, for my thousand questions and minute examination of many things so familiar to them evidently caused a doubt as to my common sense if not my sanity. We parted however, Diego and I resuming our journey, and the parting salutations of "Adios," "Vaya con Dios Senor," ("To God," "Go with God Sir,") followed us.

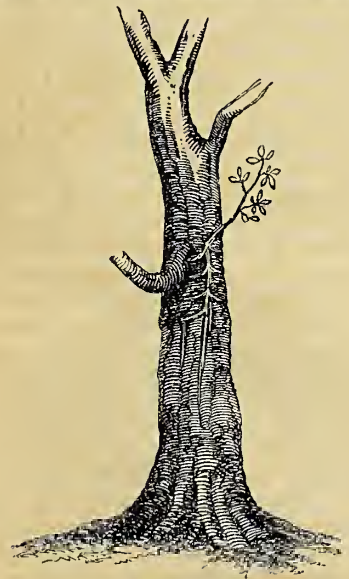


Fig. 2.

But to return to the subject of our TREE. During that day, and in many other days' travel, I saw numerous specimens of the Mata Palo, without coming to a solution of the riddle: after much observation of the tree however, at different stages of its growth, I subsequently learned its history, and how it had earned its name of Mata Palo, or *tree killer*. It was, so to speak, a tree which had fastened itself upon another tree, and eat out its vitals. I found the proof of this in various stages of growth. Thus, as seen in figure 2, the Mata Palo is a puny plant—a parasite growing from a seed lodged in the bark of the original tree. During the long rainy season, it has sent down roots of sufficient length to penetrate the earth. With a rapid growth this plant stretches its trunk and branches right up among the thickest of the entangled mass as if it thrived by crowding. Its descending roots run into the earth, closely attached to the bark by fibrous rootlets, and sending out side roots which stretch around the trunk of its foster parent, and these again branching, soon interlace and grow together, and as they grow, contract the space within their merciless grasp, as seen in our engraving, *figure* 3. The tree thus enclosed can not longer expand its trunk in conformity with the demands of its nature, and therefore dies. In that climate, decay is as rapid as growth, and in a very few years all traces of the old tree have disappeared, and a vacant space is left where it formerly grew. This space indicates the size of the unfortunate victim. The Mata Palo is a species of fig tree, having a milky sap and a small inedible fig shaped fruit, with a glossy leaf, in shape and size like the Rhododendron. In size it becomes a first class forest tree, growing to the hight of one hundred and fifty feet or more.

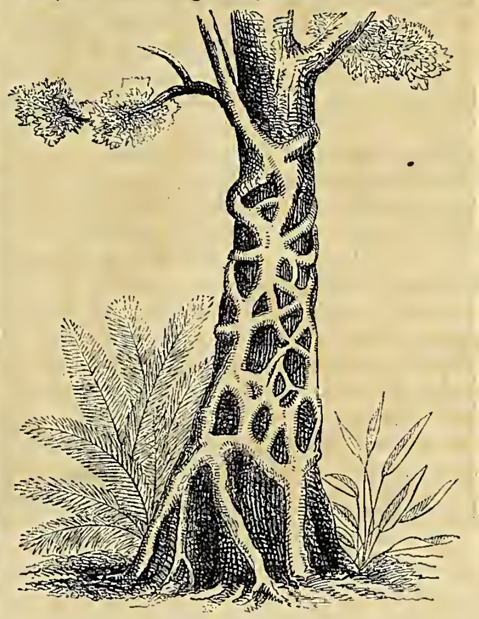


Fig. 3.

I saw one instance in which a Mata Palo had found its lodgement on the trunk of a Palm tree. It had followed its usual instincts (if we may so term its peculiar habits of growth) and had duly surrounded the Palm, so that the latter was only visible at two or three points of its stem and at a hight of fifty feet, its plume like top emerged from the arms of its enemy still green and flourishing. It is a fact in vegetable physiology, probably unknown to the strangling brotherhood, that Palms are of endogenous growth; that is, the new layers of wood are deposited within the interior of the stem, while the outside may be squeezed or cut without injury to the tree, and that the stem never increases in diameter, however tall it may grow; quite the reverse of that which takes place with exogenous trees like the Oak, Maple, etc., whose new growths of wood are deposited just beneath the bark. In another instance a Mata Palo had mistaken a column-like mass of rock which had become detached from the cliff. The rock was ten feet in diameter and perhaps twenty feet in hight; it was well bound about with woody cables, but seemed notwithstanding very comfortable. The tree had apparently discovered its mistake, and wore an unthrifty look, though about half grown. One could not help exulting as at a case of disappointed villainy.

Town Trees.

No more is every tree a town tree, than is every man made to live on a pavement and amid piles of brick and mortar. Those trees which grow very large, are not suitable, nor those subject to attacks of insects, nor tender trees, nor weeping trees, nor those which can not endure smoke and dust and hard usage generally. Considering the great number of species and varieties, native and foreign, one might suppose, at first, that it would be an easy matter to find suitable trees in abundance, but it is not so. Some sorts flourish well for ten or fifteen years, but afterward become large and top-heavy, and are blown down by sudden gusts of wind. Some prosper finely when young, but when the bark happens to get a little injured by accident, the growth is suddenly checked, the foliage becomes sickly, and the tree unsightly. Others make so rampant a growth that their foliage hides the view of the houses behind them, and renders the walls damp and unhealthy.

What is chiefly wanted in a town-tree is that it grow slow, never become very large, be proof against insects, bear pruning well, and accidental injuries also, and in short be very hardy. No tree, to our knowledge, possesses all of these qualities perfectly, yet some do, more than others. For example, the American White Elm, the common English elm, Scotch elm, English Linden, Mountain Ash, Norway Maple and most of our native maples, the Horse-Chestnut, the red and White Beech, and the much abused Ailanthus. Disagreeable as is the odor of the flowers of this last named tree, we believe experience shows that it is in many respects very desirable for planting in towns. It will bear smoke, dust, and any amount of abuse. Somebody has styled it "the Metropolitan Tree." This is certainly more appropriate than the "heavenly" appellation with which it was first introduced from abroad.

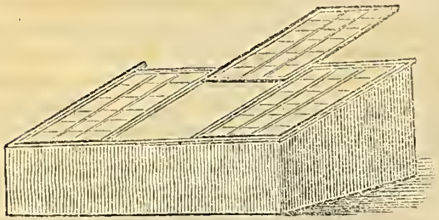
The above trees are proper for setting by the sides of streets. For open squares or parks, we may go further, and include the magnolias, tulip-tree, larch, coffee-tree, yellow-wood, Judas tree, various oaks, the chestnut, and an assortment of conifers. In some of the Parks in this City, the Southern Cypress succeeds admirably, and is a beautiful tree. The Weeping Willow, if sparingly planted, is also suitable, and does well in this latitude and southward.

By a little care on the part of those who have control of the planting, the streets and parks o a city might be made to contain a good arboretum of all the trees growing in the latitude.

Plants in Pits and Cellars.

A correspondent wishes to know what he can do with his many choice plants, in Winter. He invested largely, last Spring, in bedding plants, tea roses, etc., and does not wish now to lose them in the Winter; yet he has no green-house, or frame covered pit to preserve them in.

We should, of course, recommend the trouble of making a cold pit. Dig a pit eighteen inches or two feet deep, in a dry part of the garden, wall it up with brick or stone, or planks. Set over it a frame like the common hot-bed frame, shown in the figure below, and the work is done. Lay a few bricks on the bottom and put over them a board or two as a sort of staging, to keep the plants from excessive moisture. Here, nearly all kinds of half-hardy plants will pass the Winter safely.



But if any one can not afford the time or the money for making such a pit, the next best thing is a good cellar. If the only object is to preserve the plants in a dormant state until Spring, a cellar is better than a green-house. And these are among the plants which will do well in such quarters: Roses, Pittosporums, Fuchsias, Bouvardias, Geraniums, Oleanders, Oranges, Myrtles, Bays, Pomegranates, Aloes, Hydrangeas, Irish Yews, and many more of the hard-wooded plants. Keep the cellar as cool as possible without its freezing. These plants will want an occasional watering, to keep them from wilting.

Winter Protection of Plants.

This is the month in which to attend to the wants of all tender shrubs and plants. There are many things in our gardens, which, if they were as well provided for in Winter as the wild plants of the woods—overhung by trees and covered with leaves—would need no further care; but when in the open ground, exposed to wind and frost and sunshine alternately, they will fare hard if not protected by artificial means. North of this city, many shrubs and nearly all herbaceous plants are benefited by a slight covering. "Slight," we say, for harm is sometimes done by too thick a blanket.

For *plants*, many persons use long manure, putting a fork-full or two about each crown. This is very good, but for most things, a peck of forest leaves is the best protection. These shed the rain like a roof, and keep the roots warm enough without heating them. They will perhaps need fastening to the ground by a few sticks or stones, to prevent their being blown away. Carnations, picotees, daisies, Japan lilies, pyrethrums, snap-dragons and other half-hardy plants winter quite well, in this way.

Tender *shrubs* may be protected easily. Make a small mound of old manure or of leaves around the roots, then bend down the branches carefully to the ground, and fasten them there by short stakes. Now, lay over them a few inches of leaves or any loose litter, and then an inch or two of soil. All that they require is a light and porous covering to protect them from sudden changes of temperature. Of course, it is not expected to exclude frost entirely, for that will penetrate two or three feet in depth.

The above is all the covering that hybrid perpetual roses need, and such shrubs as Forsythia viridissima, Reeve's spirea, and others of like habit. But some tender shrubs have such stiff branches that they can not easily be bent to the ground. These must have their boughs gathered up in a bundle, and then surrounded by a thin sheathing of straw, or old matting fastened in place by stout cords. If evergreen boughs are neatly tied around shrubs, the appearance is much better than that of straw or mats. And for front lawns we recommend this mode: at a little distance, the effect is the same as that of handsomely trained evergreen bushes.

Such tender roses as the Chinas, Bourbons, Noisettes and Teas, hybernate *best* if put into a cool pit, covered with a window-frame. But if the soil be well drained, they will sometimes (with the exception of the Tea roses,) go through the Winter safely out of doors. If this is tried, they should not only be covered with leaves and soil, but should have a little roof of boards, shaped like an inverted eave-trough, to shed excess of rain from them. Still, with the best of care, many will die, and others will come out in the Spring a good deal *scorched.* Last Winter, we kept part of our tenderest roses by potting them in large pots in November, keeping them in a carriage-house chamber until December, then taking them into a light cellar, where they remained until Spring; then they were re-planted in the garden. Souvenir de la Malmaison (Bourbon,) Taglioni and Bongen (Teas,) and Agrippina (China,) wintered well, and flowered abundantly in the open ground throughout the past Summer. Again, we took up several China roses in November, laid them flat on the ground, covered them with the dry tops of phloxes and a few leaves, and finally a few inches of soil; and these wintered better than others of the same kind left standing in the ground and protected in the usual manner.

We relate these experiments for what they are worth; they may benefit inexperienced amateurs. Is it too much to believe that the time will come when we shall be able to Winter many of the tenderest plants out of doors? That will be a good time when it comes.

What of the Spergula Pilifera?

Considerable attention has been attracted to this plant during the past two seasons, especially in England, where it has been extensively advertised as a substitute for lawn grass. It was described as a perennial of low growth, forming a thick, velvety mat of the finest green, and which needed no mowing—the very *ne plus ultra*, for the lawn. Doubts were entertained of its success in this climate, as our Summer drouths it was supposed, would kill it. But it seems not to have realized the promises of the advertisers even in England, whose moist climate was supposed to be particularly congenial to its growth. A writer in the London Gardeners' Chronicle, thus relates his experience.

"I sowed several pans of seed in a cold frame and carefully transplanted to a good garden soil; but in spite of constant attention in the way of watering and shading, they made very poor progress. Other seed which I placed under the protection of a hand-glass also grew up and formed a perfect web, of which I entertained great hopes. I cut it (early in August) into small tufts and planted them upon a terrace where they had a depth of good soil. Their progress was slow but satisfactory until the approach of Winter gave them a sear and yellow aspect, and they did not improve when more genial weather arrived, but began to produce myriads of insignificant white blossoms. Now if the plant is liable to an annual recurrence of these flowers, I say that a grass lawn smothered with daisies, is, for the time being, equally effective and ornamental."

This is contrary to the accounts given of it by some other English cultivators, but what says H. W. Sargent Esq., of our own country, who has now both "Summered and Wintered" it at Wodenethe?

Cultivation of the Hyacinth.

IN THE HOUSE, IN GLASSES AND IN POTS—AND IN BEDS.

Few flowers are more deservedly popular than hyacinths. They are easily cultivated in the garden, *or in the house;* they exhibit a most attractive bloom, and are deliciously fragrant. There is perhaps no finer ornament for a window than a collection of these bulbs flowering in glasses. The following directions for their care from an English catalogue, are timely and valuable.

"*In glasses.*—Nearly all hyacinths are suitable, more or less, for cultivating in glasses, though, in making a selection for that purpose, a larger number of *single* varieties should be chosen, as the certainty of success is much greater with them than with the double kinds. In ordering, special care should therefore be taken to state for what purposes the bulbs may be required, that proper varieties may be selected. It is the natural tendency of all roots to grow downward, avoiding the light—consequently dark colored glasses are preferable for the growth of hyacinths. Let the bulbs be obtained as early as possible after their importation, though the time of putting them to the water may range from the middle of September to the end of November; the earlier however, the better. Fill the glasses with soft clean water till it barely touches the bottom of the bulb. Then stand them in a dark cool cupboard or cellar for at least a month, to encourage the roots to form plentifully before the bloom buds appear. Examine them occasionally while in the dark, and carefully remove any part that may be decaying, at the same time not injuring the young roots. Should the water become foul, change it, but not otherwise. When the buds and leaves have made a little growth, they should be brought into the full light of a window; if in a room where a fire is kept, let them stand in the window furthest from the fire; a cool place is best for them. Never under any circumstances allow them to stand on the mantel piece, a practice often followed, but highly improper. As the flower head rises, a support should be applied. When coming into flower, a little stimulant may be added to the water with advantage. Sulphate of ammonia will be found to add considerably to the intensity of color in the flower, and also to the vigor of the plant—a small pinch between the thumb and finger just dropped into the water will be sufficient.

In Pots.—The soil used, should be rich, and not over light; good loam and leaf mold, with about one fourth of well rotted manure, and a liberal addition of sea, river, or silver sand, would be a good compost. For one bulb, pots 5 inches in diameter at the top should be used; three or five bulbs may be planted in one large pot or pan together with good effect. Let the pots be well drained, and the soil and bulb placed in firmly, but the bulb not quite covered. When potted, give a good watering, and place the pots in any out of the way place out of doors, covering them with a layer of spent tanner's bark or coal ashes to the depth of 3 or 4 inches above the top of the pots. Here they may remain till they are required, bringing them into warmth and light according to the time they are intended to flower—the less forcing they have, however, the finer the flower is likely to be. When brought into a room, let them be set in the window. All hyacinths do well, and come to the greatest perfection, when grown in pots.

In Beds.—The soil for this purpose should be rich, light, and deep, and above all, well drained. Excavate to the depth of 15 inches, level the bottom, and place on it a layer of 2 inches of small stones, or any similar material that will serve to ensure good drainage. On this lay a thin covering of well decayed manure, and then fill in with the prepared compost, making the bed 4 or 5 inches above the surrounding soil, to allow for settling. Arrange the colors according to taste, and plant the bulbs 9 inches apart, and 3 inches deep from the crown. The time of planting may range from the beginning of October to the middle of November. It will be found advisable, as very severe weather approaches, to cover the bed with a layer of any protecting material.

A Floral Question.

Nobody ever yet saw a blue dahlia, or blue rose, or a yellow aster or verbena. Will such things ever be seen? Some persons think so, and foreign florists are hard at work in hybridizing, hoping to accomplish it, but their success is very doubtful. And for this good reason, viz.: Blue, red and yellow are the three primary colors, and the different hues found in the varieties of any species of flower, are produced by crossing flowers which have these different colors. Thus, the original colors of the verbena in a wild state, were red and blue; and by crossing these, we can get shades of red, blue and purple, but *not yellow.* The wild dahlias are red and yellow, and by crossing them, we get shades of red, yellow and orange, and white, but *not blue.* So far as our observation extends, no genus of any flower contains all the primary colors: hence, if the above theory be correct, none of the varieties can monopolize all the shades of color. One will lack red, another blue, and so on: hence the necessity of combining flowers of different sorts, if we would get all shades of color.

Aristocratic Flowers.

A writer in the Hartford "Homestead," closes a well considered article, as follows:

"There are flowers which seem to be aristocrats by nature. They must receive a great deal of attention; must be "coddled" and petted, and supplied with just the right degree of heat and moisture before they will condescend to put forth their efforts. And after all his pains, the florist sometimes finds, to his disappointment, that they have learned the great aristocratic art of "How not to do it." Parasites attach themselves to these, as to other great people. The mealy bug makes his meals on them; the scale-insect pursues his scaly occupation at their expense; and the red spider becoming a vegetarian, eschews flies and chews upon the choicest plants of the green-house."

Such are the inconveniences of greatness. The more common sorts of flowers, however, are for the most part exempt from the attacks of insect foes. The bees hum around them, and the butterflies hover over them, criticising them, perhaps, as one beauty criticises another, but robbing them of nothing but sweets and odors which they can spare and yet be none the less beautiful and fragrant.

Fruits with Quick Returns.

All Americans are noted for being in a hurry. They want things which will surely pay, and pay quickly. This excessive haste is not commendable. But there are cases in which expedition may be justified. An old man, or an invalid, or the tenant of a hired house may properly wish to plant something of which he may reasonably hope to gather the fruit. Can such people be gratified? Doubtless. Let them plant;

1. *Strawberries.*—From good vines well planted, a little fruit may be gathered the first Summer, and an abundant crop the second. Of course, they will need proper care, if much is expected from them.

2. *Raspberries.*—Set these out in Spring or Fall, in proper soil, cut them down to the second bud at planting, they will throw up strong canes the first season, from which berries can be gathered the second. The white and red Antwerps and the Brinkle's Orange are to our palate the best sorts, but they need bending to the ground every Winter, and covering with an inch or two of soil. The common black and the Allen raspberry require no protection. All kinds yield full crops the second and third years.

3. *Currants and Gooseberries.*—These may be raised from cuttings gathered from any good neighbor's garden, or from young plants bought at the nurseries. In either case, fruit may be expected in from two to four years. It is a wonder to us that the currant is so underrated. If it were a new thing, and slightly tender, so as to need a little petting, wouldn't it be a great affair? But the lamentable fact is, that it is an old customer, is hardy as a burdock, an early and constant and abundant bearer, is subject to almost no disease, and its fruit is wholesome and answers many useful purposes. Alas, for it!

4. *Grapes.*—These sometimes bear, the second or third year from the cutting. From strong layers, quite a number of clusters may be gathered the second year. We doubt the wisdom, however, of cropping the vine much before the third or fourth year. A little patient delay will ensure healthier vines and larger crops afterwards.

5. *Dwarf Pears*, *Cherries*, *Apples*, *etc.*—These often yield fruit the first or second year after planting. As in the case of grapes, it is doubtless wiser to allow no fruit to grow until the third or fourth year.

Need we extend this enumeration? With a well-stocked garden of vegetables maturing the first season, and with fruits coming forward and bearing crops in succession the second, third, and fourth years, any reasonable man will be content.

"Childs' Superb" Grape.

Several handsome clusters of a grape by the above name, have been laid on our table by a friend, who desires to know its origin and its actual value for out door cultivation. It has been somewhat widely disseminated as *a seedling* raised by Mr. Childs of Utica, N. Y., and recommended as a first class grape for *out door* culture. That we might get at the exact truth of the matter, we applied to Mr. Childs for information, and his statement is substantially as follows: Eight or ten years ago, he ordered a lot of exotic grapes from an eastern nursery, suitable for his cold grapery. Among them was one plant which lost its label on its way to him, and whose real name he never ascertained. After it came into bearing, it was found to resemble the Royal Muscadine, but as it differed from it somewhat, the gardener dubbed it "Childs' Superb."

A few years ago, this gardener, fond of experimenting, propagated several plants from this vine, and set one of them in the open ground. He likewise distributed plants to several amateurs in the neighborhood, some of which were set out under glass, and others in the open garden. Of the latter, those which were trained on brick walls, and covered in the Winter, have succeeded tolerably well. In some years, they have escaped mildew, and borne handsome clusters; at other times the foliage has turned brown and the fruit proved worthless. On the whole, the best that can be said of this grape, is that it succeeds about as well out of doors as the Madeira, Sweet-Water, or any other foreign grape. Under glass, it is excellent in every respect.

To the above, we would just add that some fifty vines which we saw last Summer in the open grounds of a nursery, were badly scorched with mildew, and presented a sorry look by the side of the same vine under glass, and of natives in the open garden. Any body wishing to experiment with a foreign grape in his garden, will do well to try this. The chances are against his success, but if the frost and mildew will only let him alone, he will raise some "superb" fruit.

Northern Muscadine Grape.

A WORD OF CAUTION.

Now that grape growing is attracting so much attention throughout the country, it is to be expected that advantage will be taken of the comparative general ignorance on the subject, to send out inferior varieties, to the great disappointment of those who are attracted by showy hand-bills and glowing descriptions. We have received a flaming circular, highly eulogizing the Northern Muscadine Grape and illustrated with a cut representing it as of great size. The advertiser states that: "after a trial of fifteen years with all the different varieties of hardy grapes grown in this country to the amount of 30 or 40 different kinds, the *Genuine Northern Muscadine* has yielded us, in point of profit, as ten to one of any other kind." Very likely, but money making by the propagator, is not always a test of excellence, as purchasers of Honey Blade Grass seed at $10 per bushel can testify.

The above grape was brought before the public several years ago, but its foxy, wild flavor was opposed to its general introduction, and it is not to be found in the catalogues of the best grape growers, although newer sorts are grown by the thousands. It originated among the Shakers of Columbia Co., N. Y., and is thus very accurately described by Downing. "Bunches small, short, compact. Berry large, round, chocolate, or brownish red. Skin thick, with a pungency and odor common to the wild fox grape, and is very little improvement on it. The berries fall from the bunch as soon as ripe, about two weeks before the Isabella."

Pruning Grape Vines.

For our readers of several years' standing, who have their former volumes to refer to, there is no need to say anything on the management of the vine. But for those who have them not on hand to refer to, and especially for our new friends, a word or two may not be amiss, and now especially, in this month of November, the best season at the North for the annual pruning.

There are several methods of training now in vogue. One of these is the German mode, practiced in our Western vineyards; according to which, one or two canes are trained to a single stake, or two stakes, and during the season while these canes are bearing fruit, two others are being grown for fruit-bearing the following year. In the Autumn after these first canes have yielded fruit, they are cut down, to give place to the second. The following cuts (Figs. 1 and 2) may illustrate this style of training:

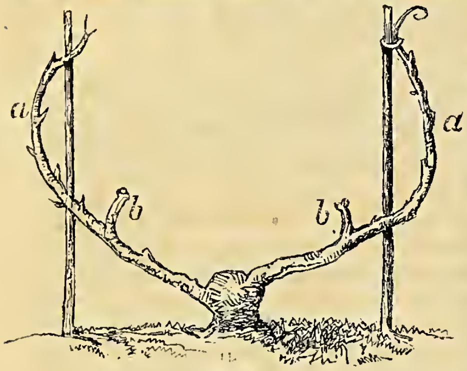


Fig. 1.

a, a, a, are the fruit-bearing canes of the present year, and *b, b, b*, are the spurs from which canes are to grow for fruit-bearing the next year.

Mr. Wm. Bright, of Germantown, Pa., has put forth a modification of this method, and claims for it superiority over all others. He recommends growing only one cane each year, and confining it to a stake four or five feet high; and he would grow this cane one year and fruit it the next, and so on alternately, as long as the vigor of the vine can be maintained. As the merits of this method were pretty well canvassed in "A Talk at the Gate," in our last number, we will say no more about it at present. We question whether it will succeed, in the long run, but hope it will, for it certainly has its advantages.

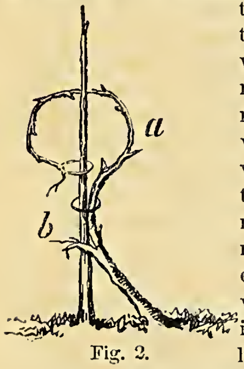


Fig. 2.

According to the other leading modes, vines are trained to trellises, and are pruned on one of two plans, viz.: the *renewal*, or the *spur* method. By the first, the two-year-old canes having once borne fruit, are cut away to allow room for an equal number of one-year-old canes to do the same thing. And while these latter are fruiting, a new set of canes are growing up from the bases of those cut away, to bear fruit in their turn: and so on from year to year, so *renewing* the wood of the vine every other year.

By the second method, the old canes are not cut away, but shoots *on the sides* of them are cut down every year to one or two strong buds at their base. Each plan has its advocates; the latter, we judge, is the most commonly practiced. The former has several important advantages: it brings in, quite often, a large quantity of new wood, and enables the gardener to get large clusters from the lower half of his trellis—a thing seldom done by the other method.

We will explain each mode quite briefly:

1. *The Renewal.—First Year.*—Beginning with a young vine, let only one strong shoot grow the first year: tie it to a stake, and pinch off, during the Summer, whatever suckers spring up from the roots, and whatever laterals push out from the axils of the leaves. In the Fall it will present the appearance shown at Fig. 3.

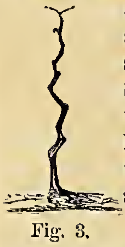


Fig. 3.

Second Year.—In the Fall (November,) cut this shoot back to three strong buds, and bind it to the ground, and cover it lightly with litter or common soil. Next Spring, uncover it, about the middle of April, tie it again to a stake, and let two of the strongest shoots grow, pinching out all others, laterals and suckers, as seen at Fig. 4. No fruit, of course, should be allowed to form on the vine this year.

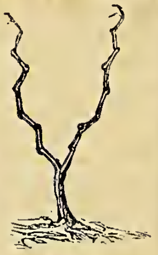


Fig 4.

Third Year.—In November, cut back both canes to within three feet of the ground, and protect them as before during Winter. Be careful in binding them to the ground, not to break the canes or bruise the buds. In the Spring build your trellis. Use cedar posts rising six or seven feet above ground, and stretch wires from one to the other, at eighteen inches apart; or light bars of wood may be nailed on in place of wire. Now, raise up the canes, and tie them horizontally to the lower bar or wire of the trellis. Let one shoot grow up on each side of the central trunk, and one from each extremity of the horizontal canes. In the Fall, the vine will look something like Fig. 5.

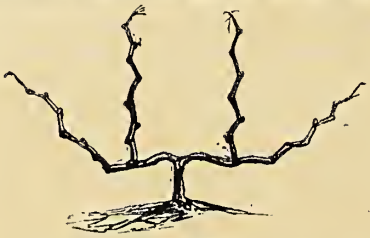


Fig. 5.

Fourth Year.—In the Fall of this year, shorten in the upright canes to about four feet, and those on the right and left extremities to within about two feet of their last year's growth. Lay down the vine as before, in the Winter. In the Spring, tie up the two leading shoots perpendicularly to the trellis, and the others tie down to the lower bars, horizontally. During this Summer, a few clusters may be allowed to grow on the upright canes. Two new upright canes should be trained up also, all others being cut off as they appear. Shoots should also be trained off obliquely from the terminal buds of the horizontal branches, as was done last year. This is done to extend the vine right and left, and to spread it uniformly over the trellis.

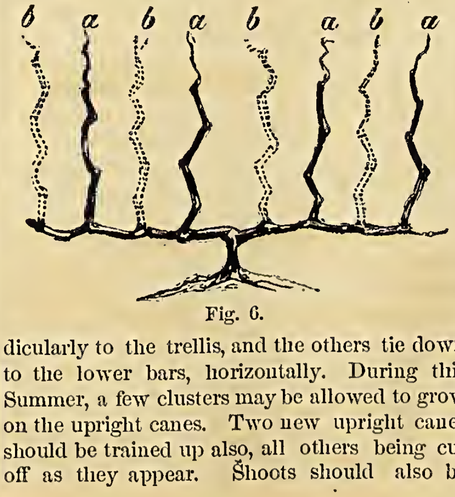


Fig. 6.

Thus we may proceed from year to year, until the trellis is covered. The vine will then appear as shown in Fig. 6. After the vine has been brought into this form, all the pruning needful will be to cut out each alternate cane in the Fall, gathering fruit from the canes of the preceding year's growth.

II. *The Spur Method.*—This system may be applied to a vine which has first been established in the other mode; only the canes must not be allowed to stand on the trellis nearer together than eighteen inches or two feet, thus allowing for the growth of spurs or side shoots. Or the canes may be trained off obliquely, in a sort of fan-shape, like Fig. 7. But however managed, the main branches are not to be cut away, they remain permanently from year to year. Shoots pushing out *from the sides* of these permanent canes are to be pruned back every Autumn, to one or two strong buds near the base of each shoot. Fruit bearing branches will start out from those spurs.

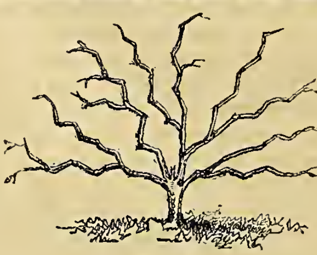


Fig. 7.

Our own experience does not lead us to recommend one of these methods to the exclusion of the other: we practice both, and secure good results from them. Those trained in the spur method, are the least difficult to lay down for Winter protection, and if a cane becomes injured, its place can easily be supplied. The renewal method gives us the finest clusters and those most evenly distributed over the trellis. Either method *well followed out*, is a thousand times better than the no method so widely prevalent.

Wild Grape Wine Manufactory.

From the Boston Cultivator we learn that the mammoth wine presses of Messrs. Paige & Co., under the Boston City Reservoir were set at work about Sept. 20th, or rather later than last season, the crop not ripening as early. Grapes are likely to be very plenty; one man in Rhode Island has contracted with the firm to furnish 20 tuns. Connecticut and Massachusetts are also supplying large quantities. Two years ago, no less than sixty tuns of wild grapes were made into wine at these presses, and such has been the demand for "American grape Wine," that very little of that vintage remains on hand.

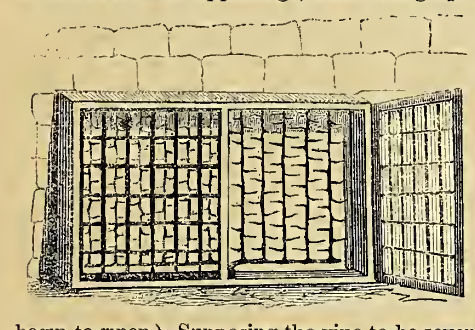
FRUIT VERSUS GOLD.—The California Farmer states that the sales of fruit from the farm of G. G. Briggs, of Marysville, amounted last year to over $100,000, and doubts whether any single gold mine in California, yielded as much during the same time.

LONG LIVED APPLE TREE.—It is stated that an apple tree on the premises of Dr. Elisha Lord, of Abingdon, Mass., has borne large quantities of excellent fruit every season for seventy years past, and is still in vigorous condition.

Grape Growing under Difficulties.

Fruit-growers at the far North sometimes complain that they can not ripen many of the better grapes, because of early frosts. The Isabella, Diana and Catawba approach maturity, and give promise of large crops, when lo! severe frosts set in, and the work and hope of the whole Summer are destroyed: the grapes are frozen when only half ripe. This has happened, to our certain knowledge, for two years past, in a certain hilly district, not fifty miles north of Albany. Such calamities can be avoided, of course, by building regular glass houses; but graperies are so expensive that only a few persons, here and there, can indulge in the luxury. So, again, the attempt to raise choice foreign grapes in the open air of this country, is seldom successful, on account of the attacks of mildew.

Both of these difficulties can be met quite well, by the contrivance shown in the sketch below. This is nothing more than a vine trained against a wall, and enclosed in a rough frame with a glass front. Such a frame might be built against the south side of a high fence, or a shed, or any other out-house. It may be made of undressed plank, by any one handy with a few carpenter's tools. The glass frames can be bought without much outlay of money. They should be hung on hinges, so as to open and shut at pleasure, according to the demands of the weather. (In some quarters, we regret to say, a lock and key would be a useful appendage, when the grapes begin to ripen.) Supposing the vine to be seven feet high and twelve feet broad, the cost of the whole need not exceed $10. The sash should be taken off, and put under cover in Winter.



We will just add that a friend of ours, in a Northern county of this State, hastens the maturity of his grapes by simply training them on a brick wall built for the purpose, and covered with a coping or shelving projection eighteen inches wide. The latter is designed to protect the vines from untimely frost.

* * *

The Best Arguments from the Ground.—A correspondent in sending a list of subscribers for the *Agriculturist*, alludes to his experience with that class of persons who know too much (in their own opinion) to take an agricultural journal, and says: "I can not find time to leave my farm to argue the point with such, but if I stay at home and *raise* some arguments on my farm, perhaps they will be convinced that it is to their interest to take such a paper." Truly said—ten extra bushels of corn per acre, are worth more in such a discussion than a hundred lectures. Let every farmer practice as well as read reliable teachings, and others will not be long in finding out and adopting the secret of his success.

* * *

Very Obvious.—The editor of a new agricultural paper we have just received, says in his opening address, "there is scarcely a farmer among us who has not become enlisted in the dignified pursuit of cultivating the soil." May we inquire, what is the occupation of the *farmers* who are not 'enlisted in cultivating the soil?'

* * *

A Cheap Pump.

W. R. Bunnell, Fairfield Co., Conn., gives the following method of constructing a cheap and efficient pump. He takes wooden tubing, such as is used for the endless chain pump, of any required length, and having nailed it a little more firmly upon the sides to make it water tight, drives in a plug at the lower end and tacks it there. The plug has an inch auger hole bored through it. The bottom of an India rubber shoe is nailed over the hole on the upper side of the plug for a valve, as shown at Fig. 1. Next sharpen one end of a stout wooden rod, and nail a piece of stiff leather upon this end, so as to make a funnel-form bucket to play inside the tubing as seen in Fig. 2.

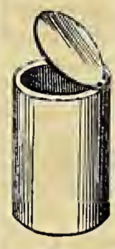


Fig. 1.

The leather may be four or five inches wide, or sufficiently large to fit snugly against the sides of the tube; the edges may be sewed or tacked together along its sides. The upper end of the rod may have a lever handle attached to it if desired, but there is so little friction, it will hardly be necessary, as the pump will work sufficiently easy after the manner of the old fashioned dash churn. A simple cross-piece at the top is, however, convenient. A wooden spout can be introduced at the upper end, as in any other pump. The upper box or bucket will always sink below the water, and be ready for immediate use at all times until the cistern is dry. To guard against frost, a gimlet hole should be bored in the tube, to let off the water below the freezing line.

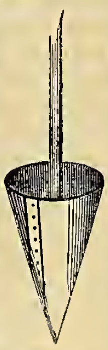


Fig. 2.

Mr. B. constructed one for his own use, the whole cost of which, for a well 19 feet deep, was $1,65, and he likes it better than any pump he has seen. This is, at least, a convenient and cheap method of fixing a temporary pump to drain a cellar, clean out a cistern or well, etc.; and being portable, can easily be changed from one use to another, or laid away until wanted. Where the ordinary tubing can not be had, a carpenter can easily make two trough gutters by planing out two pieces of narrow plank with a rounding plane, and then nail them together. It is not necessary that the hole should be exactly round.

* * *

Cement Water Pipes.

A correspondent inquires if good, reliable pipes can be made of water-lime cement, for bringing water from a Spring distant a half mile, to his house.

Undoubtedly so. First, excavate your ditch full three feet deep, to be secure against frost, and wide enough for a man to stand and work conveniently in it. If there are moderate inequalities in the surface of the land between the spring and your dwelling, it will make little difference, if there is a general descent. Make the bottom of the trench smooth; mix your mortar in the usual way, two thirds sand and one third lime, the sand being coarse and clean.

Provide a trough six feet long, four inches wide and four deep. Fill this with mortar and then turn it suddenly over, depositing the mortar in the bottom of the ditch. Immediately imbed the rod which is to make the bore, in the mortar, and then invert another box full of mortar upon it. Now, carefully draw the rod nearly out, invert another box of mortar in the trench, and proceed as before. The rod may be of any size desired, from half an inch to an inch, or two inches. One inch will answer for all ordinary purposes. At all times, but especially in laying the pipe through hollows, be sure to make the joints tight, and let the mortar be a little thicker there than elsewhere, or there will be danger of bursting from the great pressure. Nor should the water be let into the pipe while the cement is soft. At the highest point in the line, remote from the spring, it is important to insert an air-tube to rise to the surface of the ground, so as to let off the confined air that may be collected at that point; else the water will not pass freely. This tube should be covered and protected against injury from man, or beast, or frost. The writer has known pipes of this sort when poorly made, to be a continual annoyance from bursting and stopping up; others when well made and cared for, have lasted fifteen years without any repairs. New-Hampshire.

Remarks.—The above plan is simple, cheap, and expeditious, and will doubtless operate well, if care be taken to withdraw the rod carefully, so as to keep a good connected passage for the water, and to have each successive layer of mortar well joined to the preceding. It is, of course, needful to secure hydraulic lime (water lime) of good quality. In and around this city the "Rosendale" brand is generally preferred. A paper read at the recent Newport meeting of the American Scientific Association, by an officer of the U. S. Army—we forget his name—gave an account of a large number of experiments to test the hydraulic cements from different localities for the use of building forts, navy-yard docks, etc. He gave the preference to the Rosendale, in Ulster county deposits, but stated that there, a marked difference in value was found in the material from beds lying near together. We took notes of the paper when it was read, but as the Association will publish it in full in the course of a few months, we will wait until its appearance, and then give some interesting facts and figures on this important subject. In the meantime we shall be glad to receive items of information from our readers on the same topic, which is becoming more and more one of practical utility to farmers as well as others.

The best plan of making water pipes with hydraulic cement is probably that described at length in the *Agriculturist* for May, 1856—Vol. XV., page 175.—Ed.

* * *

Take Care of the Chimneys.

In many houses which are built by the job, or in considerable haste, the chimneys are apt to be poorly made. Not only should the bricks of which they are built be hard, and laid up in the best of mortar, but the inside should be plastered smooth as the work proceeds. This last operation tends to promote a good draft, fills up the chinks between the courses that might otherwise be overlooked, and prevents, in a great measure, the accumulation of soot on the sides of the chimney.

But when, from any cause, a chimney becomes foul, the only way is to take care of it, otherwise the soot will fire up, some day, when one least expects or desires it. Washing-days and baking-days, if the roof is dry and the wind brisk, are fine times to get up a conflagration. Shingles burn well at such a time. Still, if one does not want such costly sport, let him take a calm, moist day, and burn out his flues. Put a faggot of straw in the fire-place and set it a-fire. Or, if you have only a stove-pipe hole, stuff in a large roll of newspapers, and touch them off. If the draft becomes too strong, partly close the hole below. Attend to this burning once a year, and you need have little apprehension from fires in your chimney.

RIGHTING A LEANING CHIMNEY.—A leaning chimney can be made perpendicular by simply sawing out portions of the mortar upon the side from which it leans; the saws being kept wet, to make a soft bed for the chimney to settle in. This method was recently tried with success at Port Dundas, Scotland, upon a chimney which was 468 feet in hight, and 50 feet in diameter at the base. Twelve cuts were successively made at different hights.

A Cheap Coal Sifter.

Enough coal to supply hundreds of families is every year wasted by carelessly throwing away the cinders unsifted. In large cities, many of the poor get their whole supply of fuel, by raking over the heaps where servants or others have thrown out the half burned clearings of the grate, or stove. The sifter described in a former number of the *Agriculturist* is very convenient, and will soon pay for itself in the amount of coal saved, besides rendering the ashes more fit for purposes of manure. For those who can not well obtain such an apparatus, the following which will answer every purpose, will be valuable.

Take an old sugar barrel with a handled cover, cut two holes in the top of the chimes on opposite sides, two inches deep and two inches wide. Buy a common sieve for a shilling, strap it to an old shovel, and place it in the barrel, the handle in the holes or rests above mentioned. Put your coal into the sieve, put on your cover, take hold of the old shovel handle and shake, with as much side motion as you please. Take off the cover, lift the sieve by the handle and turn the coal, at arms length, into your hod.

For the American Agriculturist.

Untidy Housekeeping—Women not always at Fault.

[PRIVATE NOTE.—What follows is not for housekeepers to read themselves, but for them to mark, and place where their poorer halves will be pretty sure to see it.—ED.]

It's all very well, Mr. Editor, to be lectured about our housekeeping, to be told of the comfort, the felicity, and all that sort of thing, which a tidy, well kept house will afford, but for one, I'm getting a little impatient that writers generally take it for granted that the ladies alone are responsible in this matter; that if dust collects on the furniture, if litter is strewn on the carpet, if the table linen is not snowy white and the cooking stove jet-black—in short, if every thing is not in the very best "apple-pie" order, it is because the mistress of the house is a slattern. That *may* be the case I admit, but again, it may not be. Here is an illustration: My friend Mrs. F—— lives in a two story house on the main village street, where there is almost constant travel over the unpaved road. Much of the time. clouds of dust fill the air, and come sifting through every crevice, settling down upon the carpets and furniture, and reducing every thing to a most undelightful uniformity of color. The good woman sweeps and dusts, to little purpose—to keep clean, she would have to dust the air itself. Now, when that house was built, she tried her best to have Mr. F., lay the foundation further back from the street; there was room enough, but no, he must be on a line with his neighbors. One would think he might now fill the small yard with trees to exclude part of the dust, or cover the road with gravel, or occasionally spread tan bark over it, to keep it from rising; but instead of that, he wonders that Mrs. F., does not keep the parlor neater. When it rains, the dust settles into mud, and Mr. F. *looks* bad words at the tracks on the kitchen floor, but he has never laid even a plank walk from the street to the door, and the edge of the sill is the only foot scraper. Mrs. F. long ago asked for a closet with hooks for hats and clothing, and shelves for the children's books, but to this day, these articles are distributed about upon the mantel piece, and on nails driven into the wall—that is, when *she* places them there, for the boys imitate their father, and lay their things on the first vacant chair, or in an unoccupied corner. His lordship uses the stove for a spittoon, and the tablecloth for a napkin, he smokes in the sitting room, and mends his harness in the kitchen, and thanks Mrs. F. for her constant endeavors to be tidy under such difficulties, by wishing she would keep a neater house. If any one wants further evidence that the men need a share of the lecturing, let them visit the house where the wife has been absent a few days, and my word for it, they will be ready to make some allowances for the apparent short comings of .the HOUSEKEEPER.

A Word for the Babies.

To the Editor of the American Agriculturist:

Is it not a little singular that while the kitchen, the parlor, the bed-rooms, and even the garret and cellar, receive their due share of attention in the *Agriculturist*, few of your correspondents have a word to say about the little ones? Nice furniture, good cooking, proper table manners, etc., are all important in good housekeeping, but what mother would not rather hear about her baby, than any other subject that can be introduced. Listen to the conversation when ladies meet of an afternoon. What "dear little creatures" they are, to be sure, how cunning, how forward, or—how troublesome. Then too, observe how when a visitor wishes to ingratiate himself with the head of the family, he addresses himself at once to the baby; if he can win a smile there, he need not fear an unfavorable reception from the mother.

It makes me smile to read the plans laid down in some books for doing the household work. There is an hour set for rising, so long a time for getting breakfast and clearing up, so much for sweeping and dusting, etc., and so on to the end of the chapter, making every thing go by the clock, and like clock-work—on paper. Who doesn't know, that forty times a day, whether washing, ironing or baking, when baby cries, every thing must be dropped at once, and its mouth be stopped in some way?—some mothers know only one way, but of that hereafter. Why you might as well lay down the number of hours each day that a sailor shall have his sails up and arranged in a particular manner, and expect him to get safely to port. The first *squall* knocks all such calculations overboard.

Now, since these costly little treasures necessarily take up so much time and attention, and in view of the inexperience and ignorance of thousands of young married people, it appears to me, that if some capable mother would teach us *how to take care of the baby*, she would add interest to your columns, and be a real benefactress. I'm sure the household nursery is worthy of as much attention as the tree nursery, to which you devote a column monthly, and if you agree with me, we may hope that this subject may hereafter receive due attention. MARTHA.

REMARKS.—A most excellent suggestion; certainly, let the babies receive their share of attention. Who will tell our readers, how to keep them comfortable and healthy, how and when to feed them, how to amuse them, to give them proper exercise, describe their proper clothing, and a hundred other matters that a *man* would never think of? We will cheerfully make room for good *practical* suggestions, however faulty may be the style—that can easily be remedied in the editorial mill, where most contributions are ground over.—ED.

Errors in Dress.

It need not cost much money to dress well, and on the other hand a person may be expensively and yet not well dressed. Foreigners say that American ladies spend more for clothing and ornaments, than those of any other nation, but they do not express the opinion that the ladies of this country are more attractively arrayed than those of Europe. Some one has made a whimsical calculation after the following manner. "There" says he, "goes a lady with fifty bushels of corn upon her back,"—her silk dress equaled the market value of the corn, another had a bale of cotton in her bosom, represented by a diamon pin, a third carried two tuns of hay upon her head in the shape of a bonnet, and another was encumbered with a quarter section of land in the form of a brocade skirt. Yet not one of these persons was well dressed. The observer looked upon them as he would into the window of a dry-goods store, or a jeweler's shop; he saw a splendid display, but it attracted attention from the wearer, to what she carried. The object to be gained by taste in dress is to adorn, to attract attention to the wearer, and to highten the pleasure of looking upon her. Now if the bonnet, the shawl, the jewelry, or the dress is the center point of attraction, they detract from, rather than add to the wearer's charms. A good writer on this subject has said: a lady is well dressed, when you can not remember a single article of her clothing—meaning that no one thing should be so conspicuous as to attract attention, but that all be suited to the peculiar bodily habit of the wearer. Now, whatever fashion may dictate, it can not make the same *style* suit a tall and a short person. The present amplitude of crinoline gives a rather queenly air to a tall dignified lady, but upon a short, and especially upon a corpulent person, its effect is ludicrous. When narrow striped stuffs are worn, they make a person appear taller, and a very tall lady should shun them unless she wishes to highten her apparent stature; let her rather adopt wide stripes or large figures, or patterns which have a contrary effect. So too in the matter of colors. At one time pink is the prevailing style, and it suits a dark complexion quite well, but it gives a frightful greenish hue to one of very fair or pale cheeks; such should choose green or blue tints if they would appear well in preference to being fashionable, while darker colors are safe to nearly all. Again, good taste is greatly violated by a wrong assortment of colors in dress. Thus a violet bonnet may be entirely spoiled by blue flowers, or a yellow skirt by a pink sash. Green associates well with violet; gold with dark crimson or lilac; pale blue with scarlet; pink with black and white; gray with scarlet or pink.

The most objectionable and perhaps the most common fault to be avoided, is want of harmony in the richness of the several articles composing the dress. Thus we often see a costly mantilla thrown over a cheap delaine; a gaudy bonnet accompanied by a cheap shawl; a splendid parasol shading a "lady" in calico. Such a contrast reminds one of the school boy who invested his first half dollar in a pair of silk gloves, and was saluted by his comrades with the cry, "patch on both knees, and gloves on!" The delaine, the calico, the mantilla, the parasol may all be well enough by themselves, but they do not accord well together; for harmony is the very first essential in correct taste.

Pudding and Pies—A Domestic Chat.

"How is it, wife, that we have had neither pies nor puddings of late?" said my good man one evening, as he sat in his favorite corner, while I was washing the dishes. "For the simple reason that I have done making them," I replied. "Of pies, you eat the inside only, leaving the crust to be thrown away because of its toughness, though I always use plenty of shortening and work it in well. And as for puddings; I have tried nearly every recipe in the books, and found them troublesome, expensive things to make, and when done, fit only for the stomach of an ostrich!" "Yes Madam, that is just so. We too have often been obliged to swallow a queer mixture of fruit, and a leathery substance, (supposed to be dough) asking no questions for conscience' sake, but wanting to ask a good many for the stomach's sake."

Just then fortunately Aunt Keziah, as we all call her, came in, and I stated the case to her. "Give up puddings and pies!" exclaimed she, "not until you've tried my way, and then I warrant you'll not give them up." "In your book recipes," continued she, "they almost always spoil puddings by putting in too much fruit. Use only half the fruit mentioned, and you will have a better pudding. I like a pudding made in this way: In a quart of milk stir three well beaten eggs. Toast and butter a large slice of bread, cut it in pieces an inch square, and stir into the milk; grate part of a nutmeg over it, sweeten to your taste, then let it bake. If you wish to add fruit, a handful (a quarter of a pound) is sufficient.

For another good pudding, to one quart of milk add two table spoonfuls and a half of rice, sugar to your taste, a little nutmeg or cinnamon, and a lump of butter half as large as a hen's egg; this baked slowly for two or three hours, will be of the consistence of jelly, and very nice. An improved method of making custard is as follows. Scald a quart of milk and pour it over four well beaten eggs, stirring meanwhile; sweeten and flavor to your taste; then pour into your cups and bake. Custard made thus requires fewer eggs and is richer.

You can make pie crust or pastry tender and flaky in the following manner. To a quart of flour add a third of a pound of lard, a fourth of a pound of butter, and a teaspoonful of salt. *Mix lightly with a spoon*—don't think of kneading it, for the more you work it the tougher it will be—then add enough cold water to moisten it. Take out what you require for one pie, and sprinkle enough flour over it to roll it, line and fill your dish; then for the top repeat the above process, spreading on a piece of butter as large as a hickory nut. Then dust on flour, and fold the dough together before rolling it. This recipe never fails to make excellent pie-crust. The secret lies in *not kneading* it. Pastry should be manipulated as little as possible.

I followed Aunt Keziah's directions, and now my husband compliments my puddings and pies so much that I am vain enough to think them worth a place in the *Agriculturist*.

ALICE.

Those Pickled Apples.

A lady reader says: "Don't fail again to tell the housekeepers who read the *Agriculturist* how to pickle apples in the manner described by you some two or three years since, with any improvements in the process. I have for two years put up pickled apples in the way described, and we all value them very highly."

We have found no improvement upon the plan referred to, which was this:

Take a peck of sweet apples and pare them. Boil them until tender in a syrup made of 4 lbs. of sugar and a quart of vinegar; then remove them from this syrup, and make a new syrup of 5 lbs. of sugar and a quart of vinegar, to which add two teaspoonfuls each of cloves and cinnamon, tied in a bag; let this syrup boil 15 or 20 minutes, and pour it, while hot, over fruit. The first may be used for other sauces.

The Editor With his Young Readers.

THANKSGIVING.

In most of the States, "Thanksgiving Day" comes during this month. Soon the turkies and ducks and chickens will be selected and shut up to fatten, the golden pumpkins will be brought from the field to be melted down into rich pies, the cook books will be hunted through to find dishes fit for American Sovereigns on their high feast day; the housekeepers will be filled with busy cares of preparation, and the boys and girls with anticipations of the "good time coming."

This keeping of an annual feast is one of the best American customs. A few years ago it was confined to New-England where it originated, but it has now become national—every State, we believe observes it. Rare times we have enjoyed on such occasions, when all the family, young and old, were gathered at home, and the day was spent in reviewing the events of the year since last we met.

Do you know how the custom originated? It was in one of the early colonies of New-England. One year they had not raised enough to live upon, and unless help should come from the Mother country, England, they must perish. It was a sorrowful time, and they appointed a day of fasting and prayer, that God might send them relief. The day before that so appointed, a ship laden with provisions arrived, and the fast day was changed to a feast, and a Thanksgiving Day, and it was thereafter commemorated yearly.

Would you not have been truly thankful at such a time? But is there not reason to be more thankful to the kind Providence that has given the sunshine and rain, the favoring seed time and the bountiful harvest, and thus prevented our being reduced to danger of starving? When the day comes, sit down in the morning, and endeavor to write out how many kindnesses you have received during the previous year, and you will soon find that there is cause enough to be grateful to the Giver of all good.

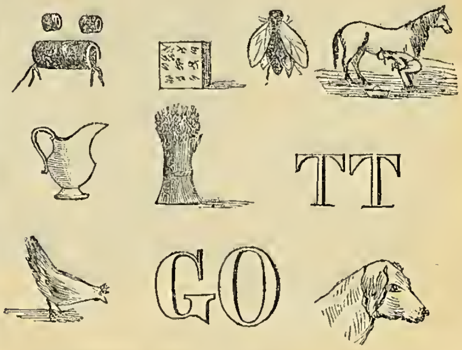
A SMALL MAN.

He was six feet high and well proportioned, but that did not make him great, as you shall hear. It was near Thanksgiving Day, and he called on the Minister at whose church he sometimes attended, to inform him that he need not buy a turkey, for he himself had selected the best one in his yard, a noble fellow, for the minister's especial use. Sure enough, the evening before Thanksgiving, the man appeared with the turkey, which was indeed a magnificent bird. The minister thought he could do no less than invite so kind a friend to dine with him, and the invitation was quickly accepted. About dinner time the man made his appearance, bringing with him his wife and three children, which were more than were expected, but nothing was said, as the turkey had made them welcome. The dinner was duly attended to, the boys, particularly, doing wonders in the eating line. As they were about leaving the table the minister remarked "that was a noble turkey, he must have weighed at least eighteen pounds." "Just that, to a notch, replied the man, *and he comes to one dollar and eighty cents.*"

The minister was too much taken aback to say a word; he paid the bill on the spot, and very properly concluded that it does 'take all sorts of people to fill the world.'

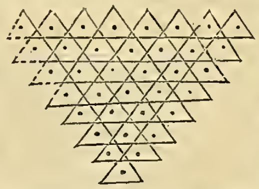
NEW PROBLEM.

We have space this month but for one puzzle, but must give our "little folks" more room hereafter. No. 29.—An *Illustrated Rebus*, a very good motto done up in the picture language. What does it read?



ANSWERS TO PROBLEMS IN SEPT. AND OCT.

No. 24. *Dot Puzzle.*—We have found by inspecting the various answers received, that there are many ways of drawing the lines according to the directions given, and we have accordingly given credit to all who succeeded, though their method differed from that here shown.



Commence at the upper *left hand* corner, follow the plain line, and finish by passing over the *dotted* line.

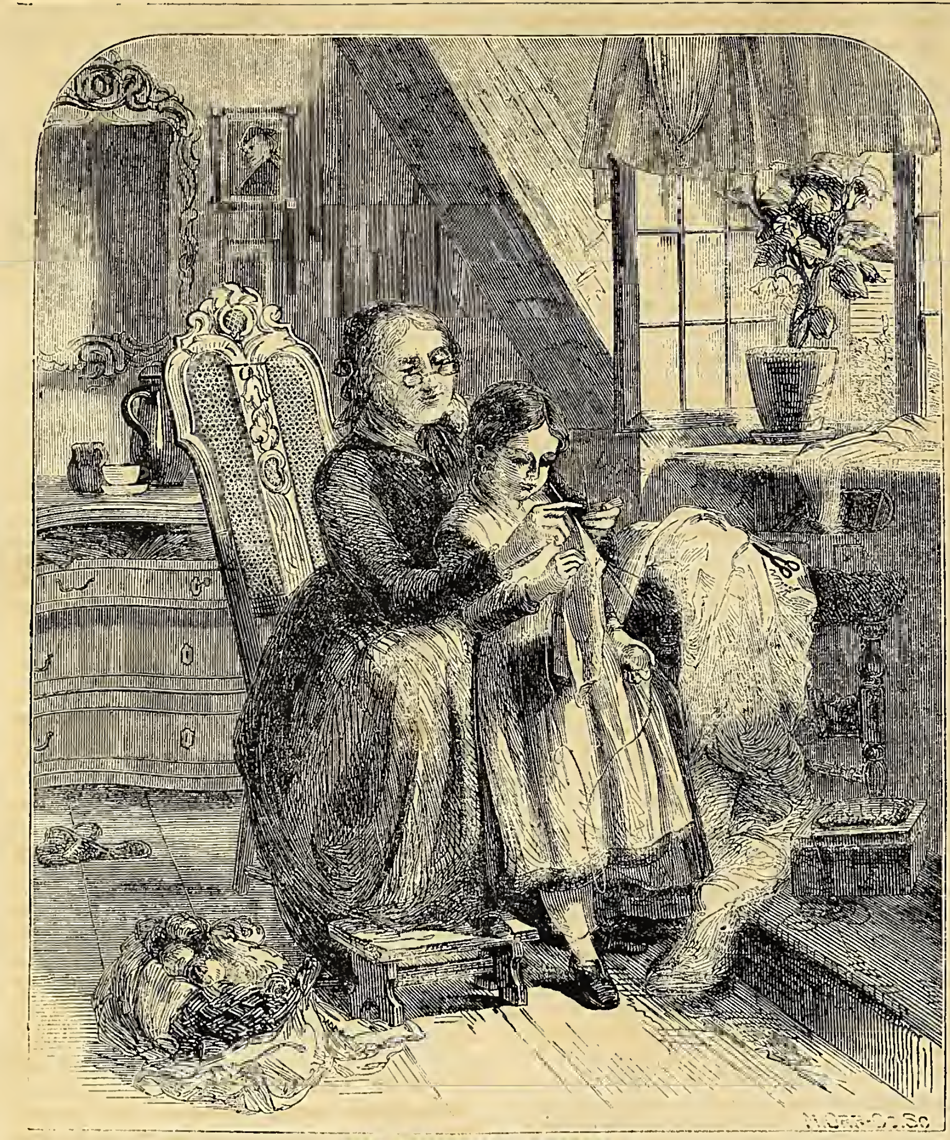
No. 27. *Enigma.*—A daily morning newspaper.

No. 28. *Illustrated Rebus.*

Be not too wise, nor over nice,
For if you be, you little see
How like an idiot you be.

Nearly all who sent answers to this, omitted the word "little," but as they were so nearly right, we have given them credit.

Correct answers received up to Oct. 10, as follows: John E. Hardisty, 24; William Follet, 25; R. R. Murphy, 24; Frank B. Ridgway, 25; Ermon A. Hull, 24; A. M. Sigmund, 24, 25, 26; A. Gonnier, 25; Robert M. Hasbrouck, 25, 26; John A. Johnson, 26; Joseph Clayton, 24, 25; Geo. L. Emery, 24, 26; Wm. P. Kochenour, 26; Wm. Macy, 25, 26; both answered in rhyme, which we have no space to print; J. Conway Shaler, 25; E. Cook, 24, 25, 26; Helen M. Peck, 28; Jarvis H. Arnold, 28; Martha A. Campbell, 28; Joseph T. Mason, 28; Louis Andrew Jackson, 28; "Glen Cove," 24, 28; M. B. Eshlman, 27; John Halifax, 28; T. M. Hequembourg, 24, 27, 28; Hiram Maine, 24, 25, 26; James McKill, 26; Gilbert Spicer, 27; Willie J. Rice, 28; Clara A. Boyce, 28; H. H. Bayley, 28; Mary F Emery, 28.



THE KNITTING LESSON.

(Engraved for the American Agriculturist.)

ABOUT THE PICTURE.

Happy little Jennie! and happy grandmother too; for she enjoys the teaching as much as Jenny delights in learning. Notice how affectionately the dear old lady's arms are thrown around her little grand-daughter, who loves to be so encircled. She could have picked up the dropped stitches, or shown Jennie how to seam, or to set the heel, just as well without drawing her so near, but she loves to have her there. This is the charm of this beautiful picture; it makes us love them both as we look upon it. No wonder the little girl looks so intently to see how the thread should be placed; her grandmother is so gentle, and so patient.

How neat and tidy every thing looks about the room; and they love flowers too, as you see by the plant on the shelf near the window. With such good influences around her, Jennie can hardly fail to grow up a pleasant, loving, and good girl. We can quite easily imagine the history of this little family. Jennie's father and mother are dead. She had no home when they left her, but her grandmother has taken her, and as she cares for her, she is often reminded of her daughter, Jennie's mother, whom she once instructed in the same manner.

Perhaps in looking at the picture you can imagine a story that will please you better than this; and it will be a good exercise. In this way the imagination is cultivated, by which we may create a little world of our own, and place in it such inhabitants as we choose. If we are careful to think only of objects that excite proper feelings, such story-making will give us healthful pleasure. It is for this purpose that pictures like this full of good sentiments and suggestions, are introduced here from time to time, so that you may be instructed as well as amused. Do you like such teaching? Well, we trust you may remain in the *Agriculturist* school many years, and that the lessons given, will not be lost. We feel sure they will not, and this makes our labors doubly attractive.

DON'T FRET.

"Was there ever such a piece of work as this, Aunt Carrie," said Lina in great disgust. "I have sewed this sleeve in wrong side out and I took such pains with it too—It is too bad," she continued, throwing the work from her.

"I am really sorry, Lina, but I would not waste any time in fretting. You could have ripped out a good many stitches by this time. Just as soon as as you see clearly how and where you have made an error, set right to work and mend it. There is my little knife, dear, it will take but a few minutes to undo your work, then you can start fair again."

In a very little time the seam was taken out, and Lina looked up more pleasantly.

"There, Auntie, I am just where I set out once more. If it had not been for you" she said laughing, "I should not have begun to take it out this half hour yet. It seemed an endless task."

"Lina, did you ever hear your mother speak of Miss Philena, the seamstress in this village in its primitive days?"

"Yes, indeed, and I have laughed over her queer sayings more than once. Father often quotes her."

"I have often quoted her to myself, or at least a little incident in her experience; especially when I was tempted to get out of patience with my work. She was a poor, industrious body, rather odd in her ways, but a favorite everywhere. One week she was making a coat for Beriah Applebee, and it was one of the few great occasions of her life. She felt to the full the solemn responsibility resting upon her. Cloth was *cloth* in those days, and had to come 'all the way from Connecticut.' Commonly people dressed in homespun, and it was not quite so serious a business to make that up. But this beautiful bottle green cloth was on her hands, and she was all of a tremor with excitement. Every day 'Riah' came in to see how she was getting on, and that added to the poor little woman's disquiet. At length, the last of the enormous button holes was neatly finished, and she slipped in the big buttons, about the size of sauce plates, to see the effect. No one can describe her feelings, when she saw for the first time that she had made them on the *wrong side.* What was to be done! The cloth was ruined, and she could never hope to save money enough to pay for it. But Beriah's good old mother cheered her up. 'You just come right into my little bedroom' she said, 'and pick out the stitches very carefully, then you can darn them up so nicely nobody will ever know it when the buttons are sewed on.' Philena did as she bade her, and no one was ever the wiser for her mistake, until some years afterward when the coat was turned and made over; then the old button holes came just right. That was much more of a task than taking your sleeve out, wasn't it Lina?"

"Yes indeed, Auntie, and I will try to remember it when I get so out of patience with such a trifle again."

JUDGE NOT FROM APPEARANCES.

A lady friend contributes for the *Agriculturist* boys and girls the following capital story showing the danger of judging from appearances.

"When I was eleven years old, my mother removed to the country. Our nearest neighbor was a minister, by the name of Wayland, who in addition to his ministerial duties, owned and cultivated a large farm. One night my attention was attracted to a bright light in one of the upper rooms of our neighbor's house. In a moment I saw the wife fly past the uncurtained window, closely followed by the husband, who was armed with a huge fire shovel—round the room she went, still pursued, and as I listened breathlessly, I thought, nay I was sure, I heard a scream. I hastened to my mother, and told her what I had seen, and we both looked out, but the light was gone, and all was quiet. Notwithstanding my mother's judicious warning "to say nothing about it to any one," before school was out the next day, I had confided it to my bosom friend, and in a week half the village knew it, and a great talk it made, I assure you. Finally it reached the ears of the deacons, who at once proceeded to investigate its truth. My mother looked grave and troubled when they called, but conscious of having told only the truth, I met them fearlessly and related what I had seen. Then they left, taking a "bee line" for the minister's, to call him to account. With many apologies they made known their errand, when to their surprise, the minister burst into a hearty laugh. "Wait a moment," said he, "till I call Polly. You see, that night I found a big rat in the meal chest, and came down for the shovel, and bade her hold the light, while I killed him. Finding no other place to hide, the rascal took refuge in the folds of her dress, and she ran screaming, till I managed to dislodge and kill him."

I have ever since been careful not to repeat an unfavorable report about my neighbors, at least until I knew the whole truth."

ONE DROP AT A TIME.

Have you ever watched an icicle as it formed? You noticed how it froze one drop at a time until it was a foot long or more. If the water was clean, the icicle remained clear, and sparkled brightly in the sun; but if the water was but slightly muddy, the icicle looked foul, and its beauty was spoiled.—Just so our characters are forming. One little thought, or feeling at a time adds its influence. If each thought be pure and right, the soul will be lovely, and will sparkle with happiness; but if impure and wrong, there will be final deformity and wretchedness.

Into which are thrown all sorts of paragraphs—such as Notes *and* Replies *to* Correspondents, *with Useful or Interesting Extracts from their Letters, &c., &c.—to be drawn from whenever we have room left here.*

Premium Queries.—To a multitude of letters making inquiries about our premiums, we have not been able to make any other reply than to send a marked paper. We have tried to give all needed particulars under the appropriate head. See the remarks under head of "Premiums for 1861" on page 348, and also the several items on the last page.

Returning Articles.—We can not possibly return articles or contributions not published. Those wishing copies of articles sent in, should copy them before forwarding the original manuscript. The non-appearance of an article for six months, is no certain indication that it will not find an appropriate place within twelve months.

Fastening Cattle in Stalls.—E. Moultrie, Monmouth Co. N. J. A strap buckled around the animal's horns, with a ring, to which a small chain or rope may be attached by a "snap," is convenient. The rope or chain should play up and down freely on the stanchion.

To Prevent Horses Rubbing.—C. D. J., Westchester Co., N. Y. recommends as a preventive of horses rubbing their tails in the stable, to hang a bunch of thorns behind them. This is objectionable; many horses will be taught the dangerous habit of kicking, by this means. A horse rubs because there is itching, the cure for which is thorough cleaning with the brush. If there be irritation, use a little oil upon the parts.

Saving Horses from Burning.—It has often been found that when a stable was on fire, the horses, terrified by the flames, refused to leave the building, and many have thus perished. In the Spirit of the Times, it is related that on such an occasion a gentleman harnessed his horses, and they were led out without difficulty. This may be the case, but it would often be impracticable from the rapidity of the fire. A simpler method, which is said to be effectual, is to blindfold the horse, before attempting to remove him.

What is the Turkish Bath?—C. J. Farnham, Kendall Co., Ill. This apparatus recently recommended as a cure for pleuro-pneumonia in cattle and horses, is simply a tight room or box supplied with means for raising the temperature of the air to a high point. There is some danger that its use may be carried too far, we think, after reading an account from a gentleman who gives his horses such a bath every week, though they are in perfect health. He says his horses enjoy it greatly, and enter the room of their own accord as soon as the door is opened.

Remedy for Laurel Poisoning.—David Hall jr., Sullivan Co., Pa., writes, that when sheep are poisoned by laurel, the effects are soon seen in their staggering gait, and that they can be readily cured by administering nearly a teacupful of water saturated with salt.

Scrub Oak.—I. B. Hitchcock, Cherokee Nation. Samples sent appear to be Quercus *ilicifolia*, a shrub from 3 to 8 feet high. The annual appearance you speak of, was caused by their being burned down each year.

Cedar Berries—Will they Grow.—S. Gilbert, Muscatine Co., Iowa. The *Cedar* (*cupressus*) has no berries, but produces seed in small cones, like the hemlock. The juniper, to which you probably refer, has a berry like the red cedar (*Juniperus Virginiana*), which will grow by sowing in the Fall, as soon as ripe.

Wheat and Chess.—Since our offer in the October *Agriculturist* of $500 for chess grown from wheat seed, numerous communications have been received, telling how the thing *may* be done—as sowing upon hard beaten soil, allowing it to winter-kill, letting poultry range over it, etc. To which we reply, accomplish the *result* according to the terms proposed, in whatever way, and the reward will be paid.

"Spot" the Humbugs.—On page 324 we have offered a word of caution which seemed to be specially needed. We refer to the matter again to ask those who have been recently fleeced, or who may receive circulars etc., to send us the particulars, in such a form that they may be used as evidence if needed. We know of several suspicious establishments, but they operate through the mails and always *at a distance from the city*, so that it is difficult to secure available evidence sufficient to warrant us in publishing them. In one case there are at least four enterprises all carried on by the same concern, but under four different names. As we have before stated, farmers as a class are more easily deceived than others, because being less crafty themselves, they are not suspicious or on the look out for fraud. It is on this account that we feel specially called upon to warn that class where the *Agriculturist* is most largely patronized.

Arbor Vitæ from Cuttings.—W. D., Essex Co., N. J. The Arbor Vitæ will grow from cuttings, but only in the hands of a skillful propagator. Several things are essential to success, as a proper mechanical condition of the soil, just enough moisture, shade, heat, etc., which an inexperienced person would hardly secure.

"That Oregon Tree."—G. F. Whitworth, Thurston Co., W. T., alluding to the shrub spoken of by P. Reitz, page 114 April *Agriculturist*, thinks it the Ceonothus, and has decided it to call it C. *odorata*, from its fragrance. He does not find it described in Michaux and Nuttall's work, nor in any treatise he has seen.

Non Bearing Plum Tree.—J. W. Bucher, Northumberland Co., Pa. The "Peach Plum" tree does not bear very young. Quite likely your five-year-old tree will yet yield fruit.

Form of Hedges.—The best shape for a hedge is, narrow at the top and wide at the bottom; it is thus more fully exposed to the light. When cut perpendicular, it can never be kept close, for the lower branches will die out. The Norway Spruce is said, by John P. Cushing, to be superior to the Arbor Vitæ for a hedge; the spruce bears cutting equally well, and is not likely to be winter-killed.

Quince Stock for Pears.—S. R. Baily, Allen Co., O. The Angers Quince, which is propagated by layers and cuttings, is used for dwarfing pear trees. They are kept for sale at most extensive nurseries.

Fall Grape Cuttings.—A correspondent of the Ohio Cultivator recommends fall cuttings of grapes. He says that on the 7th of October he cut 38 cuttings of the Delaware Grape, two or three eyes to each cutting, tied them together, dug a hole in the garden about three inches deep and covered them up, in the Spring took them up and planted them: of 38 cuttings, 36 are growing finely.

Cutting Grape Cions.—C. M. G., Broome Co., N. Y. Cut in November or December, from well matured wood; if intended for grafting, bury in sand or earth in a dry-cool cellar to keep them from starting early; and graft about the middle of May, under ground.

Location of Vineyard.—"Southern Subscriber," Rockingham Co., Va. Your location on the banks of the Shenandoah river is a good one. I there is a clay subsoil, underdrain thoroughly, and plow and subsoil deeply, manuring well before planting. As the wild vine flourishes with you, the cultivated ones should succeed well.

Grapes from Wayne Co., N. Y.—Specimens of Isabella, Diana, and To Kalon, received from W. F. Steele. Isabella lacked flavor and sweetness; Diana was very fine, and To Kalon good. Mr. S. says Isabella mildews badly and Rebecca slightly, with him, while the Delaware is quite free from the disease. The Clara mildews as badly as any foreign variety.

Rhubarb—Distinguishing the Varieties.—J. McMeekin, C. W. It is not easy to name a particular kind of rhubarb; but the Linnæus, which you ask about, has a stout stalk of medium length, quite red where it starts from the root, and is very tender and less acid than most other sorts.

Wild Tomato.—J. Jenks, Wright Co., Minn. The fruit and leaves sent are a species of the Physalis—probably P. *viscosa*, and the berries may be eaten with impunity. They are cultivated in many places with good results. We highly prize the fruit for sauce, pies, jellies, etc., and have a large patch growing in our garden. They have been much improved within a few years by cultivation. They are usually known as the "Winter Cherry" from their long keeping properties.

Paid for Itself.—Amos Heater, Mason Co., Ill., writes, that squashes of the Leghorn and Hubbard varieties, raised from seeds distributed free from this office, brought him the premium at the County Exhibition, so that his *Agriculturist* subscription paid for itself.

Physalis.—Mr. Douglass, Essex Co., N. J. The specimens you sent, are different varieties of the Physalis—one is the *viscosa*, another the *tomentosa* (the purple sort), but neither is the *alkekengi*. It is well to be cautious in the use of some varieties of this family, as they so closely resemble the poisonous nightshade, that the inexperienced might mistake the one for the other.

Cranberries in Ill.—W. E. Thomas, De Kalb Co., Ill. Your 160 acres of low land which is covered with water from November to April, will make an excellent "Cranberry patch." Plow as soon as dry in Spring, and set out roots of the Bell variety, two feet apart each way; keep down the grass and weeds, and you will soon have a mass of vines covering the ground.

More Large Squashes.—S. R. Baily, Allen Co., O., writes that from one seed received from the *Agriculturist* office, he raised thirteen very large squashes, besides twelve or fifteen which were picked off when small.

Deep Bins for Potatoes.—C. J. Welsh, Madison Co., Ind., recommends that potatoes be placed in deep bins, rather than spread over much surface. He says they are less liable to decay. This, quite likely, is true. The natural resting place for tubers during winter is under the surface, where light and air are mostly excluded.

Yellow Bellflower Apple.—E. C. Holmes, Plymouth Co., Mass. This variety is usually considered an abundant bearer, but so far as our own observation goes, it usually bears a full crop in alternate years only.

Ventilating Barrels of Fruit.—A correspondent calls attention to the necessity of allowing free access of air to fruit sent to market in barrels; particularly if it be packed soon after gathering. Inch-auger holes should be bored in both heads of the barrel to allow the moisture to pass off freely. For want of this precaution, apples frequently arrive in market in an unsalable condition, or shrivel and decay soon after opening.

Great Yield of Wheat.—Thomas Thornbury, Clinton Co., writes that the yield of Wheat in Iowa the past season, is unprecedented. Several large fields in his neighborhood are mentioned as giving from 30 to 40 bushels per acre for the first return from a virgin soil. One man gathered 105 bushels from two acres. He thinks the average yield of the State amounts to 25 bushels per acre. The Corn crop also is very large, yielding in many instances 75 bushels per acre.

Marking Bags.—C. L. Davids, Rensselaer County, N. Y., urges the propriety of farmers keeping their names plainly marked on implements, bags, etc. A branding iron may be purchased for a few shillings. Where this is not easily obtained, black paint answers a good purpose. A sheet of lead, with letters cut through, and laid on the article to be marked, makes the process very expeditious.

Prolific Wheat.—We have seen samples of a white wheat, plump but small berry, resembling Fife wheat, *said* to yield 70 bushels per acre in Minnesota. It is claimed that it originated from a few kernels found in some straw from Germany. It is a bearded sort, short but shouldered or branching heads, but whether a Winter or Spring variety, we are unable to say.

Subsoiling easily Done.—A. W. Parsons, Westchester Co., N. Y., while plowing last Fall, followed in each furrow with a light one horse plow and found it to answer a very good purpose. Where the soil is not too heavy, this method is well worth a trial.

Cleaning Seeds.—T. J. H., Armstrong Co., Pa., Tomato, cucumber, and other similar seeds, that are enveloped in a slimy pulp, are best cleansed by washing. A convenient method is to lay the pulp containing the seeds on a sieve, and place it under a stream of water, at the same time gently rubbing them with the hand. When separated from the pulp, spread upon shelves or sheets.

$1 Well Expended.—Elias Westfall, Washtenaw Co. Mich., writes that he had a large strawberry bed which yielded little or no fruit, although it always flowered full. The Article in the April No. of this Vol., page 117, describing the male and female plants, enabled him to determine that his were of a female or pistillate variety, which needed to be fertilized. He procured male or staminate plants, and gathered an abundant crop of fruit—sufficient to pay many times the price of the *Agriculturist*.

Tulips from Seed.—W. R., N. Y. Tulips bloom the second season from seed. There is no definite way to secure a certain color, but seeds from highly colored flowers will be likely to produce a rich bloom. Better select the *bulb* from some extensive collection, while the flowers are in bloom, which is the only method of obtaining a particular sort.

Keeping Marvel of Peru.—J. Taylor, C. West, keeps roots of this flower in sand or dry earth in the cellar, and by planting in the Spring, gets an earlier bloom, with larger and finer plants. He thinks that those who once try this method, will not return to seed sowing, except when the roots have run out.

Blue Flower from Iowa.—H. A. Terry, Pottawotamie Co., Iowa. The spike of pretty diminutive blue flowers which you speak of as a sort of perennial shrub, is unknown to us, as are many of the wild prairie flowers. We should judge it worth cultivating, the fragrance adds much to its value.

Wild Flower.—Wood Anemone (*Anemone nemorosa*).—F. M. Smith, Ramsey Co., Minn. The flow ers you send, appear to be of the above species ; usually found in the margin of woods, and in bloom during April.

Ashes for Rose Bugs.—"A." of Chambersburg, Pa., writes, that wood ashes sifted over the bushes will expel rose-bugs. This remedy we know to be good against the *slug*, but the true rose-bug, in this vicinity at least, is not so easily got rid of.

Snuff for Plant Lice.—Jonathan Highman, New Haven Co., Conn., writes that after trying various other applications, he has found Scotch snuff sprinkled upon the leaves and branches of infested plants, a sure remedy for aphides or plant lice.

Potato Bugs.—W. J. Erskine, Vanderburg Co., Ind., writes that the Potato Fly (*Cantharis vittata*) has been very destructive in his neighborhood the present season, and inquires for a remedy. Have any of our readers succeeded in preventing their depredations? These flies may be turned to account, as they are useful for making blister plasters. They might be collected by sweeping over the tops of the vines with a sheet held by two men so as to form a bag, then dropped in hot water, dried, and sold to druggists.

Arsenic for Insects.—John A. Ferguson, Berkshire Co. Mass., writes that a locust tree nearly destroyed last season by borers, was saved by boring a three-eighths inch hole in the trunk, inserting three cents worth of arsenic, and plugging it up. The grubs soon disappeared, and have not returned this season. [We can not commend this treatment. If the arsenic saturates the wood enough to kill the insects, it would in most cases injure the tree, and certainly be dangerous for fruit trees.—Ed.]

Castor Oil Plant and Moles.—A correspondent writes that he once bought what was recommended as a sure recipe for driving away moles. It was to put castor oil beans in their burrows. He found the beans would not "go down," with the moles—they all *came up*.

Drowning out Moles.—Milo Black, Hamilton Co., O., advises to open two holes at some distance apart, in the mole track, and pour several pails of water into the upper opening. He says with this treatment the mole will soon show his "patent forks"—[If he *happen* to be at home.—Ed.]

A Colony of Sky-larks.—A. J. Hunt, Washtenaw Co., Mich., writes that last year while plowing Summer fallow, he came upon a nest of sky-larks, which he protected from disturbance, and he has now upon his grounds a colony of 14 or more of these sweet song birds. It is to be hoped they may receive general protection and become widely disseminated.

Robert Burden, Queens Co., N. Y., states that a bird answering the description given of the sky lark has been seen by several persons in the neighborhood of Ravenswood. Attention was at first attracted by his peculiarly sweet song. The little warbler has been fortunate to escape the tribe of bird murderers that swarm over the country adjacent to this City.

Houses for Bees.—T. M. S., Hartford, Conn. The most successful apiarians prefer to set their hives in the open air, during the summer season, at least ; many leave them with only the partial shelter of an open shed, the year round. When a house is used, the bees are only allowed access to the hives through openings left for the purpose, all other communications with the interior of the house being closed.

Ventilating Cellars.—L. C. Waters, Onondaga Co., N. Y. writes that a well ventilated cellar is less likely to suffer from frost. He had been much troubled by vegetables freezing in his cellar several years, although it was made perfectly tight by banking against the sides of the house, and about the door and windows. Last season this was neglected, and to his surprise, nothing in the cellar froze. The moisture from the vegetables and from the soil passed off freely, and the air being dryer, became a poorer conductor of heat, and enough was left to keep the temperature below the freezing point. Provision should be made for ventilation when building, by carrying a flue from the cellar, by the side of the chimney or elsewhere, up to the top of the house.

Tarring Shingles.—J. C. H., Patterson, N. C. referring to our inquiry published in the July *Agriculturist* writes: A house stands near me, that was coverd in 1807 with shingles first dipped in well boiled tar, and after the roof was put on, a coat of well boiled tar was applied with a brush, and before hardened, a good coat of clean fine dry sand sifted over. The roof is pretty good yet. The tar should be boiled enough to harden when cold.

Cement for Roofs.—A. J. Duncan, Iowa, inquires for the best roofing cement. He has tried a mixture of rosin and tar, applying it to the boards, covering this with roofing paper, then giving another coat of tar and rosin, and covering the whole with sand while the cement was hot. This he says answers in warm weather, but is cracked by frost.

Filtering Cisterns.—S. D. Ingham, Brown Co., O. The proposed arrangement might answer a very good purpose, provided the cistern were always nearly filled. When the water is low, it might pass through the filter too slowly to supply the inner reservoir.

Filtering Spring Water.—S. R. Griggs. The plan proposed, of attaching a filter to the head of an aqueduct through which water is conducted from a spring to the house, would work well. The water would thereby be freed from clayey or other deposit washed in during heavy rains, and insects, etc. be kept out. The charcoal should be broken into small lumps—say the size of peas.

Artesian Well at Columbus, O.—In the July *Agriculturist*, page 200, we gave a full account of this undertaking, which had then reached a depth of 2,388 feet. The work is still progressing, and at last accounts a depth of 2,575 had been attained. Experiments were made to ascertain the temperature at that distance below the surface. It was found that the mercury registered 88°, an increase of one degree for every 71 feet. This differs materially from the increase at other places. The average increase in the coal mines of England is one degree for each 44 feet, while the Artesian well at Louisville, Ky., shows an increase of one degree in 67 feet. Several of the lead and silver mines of Saxony, indicate a rise of one degree in 65 feet. It has long been known that the temperature rises as we approach the bowels of the earth, and it is quite interesting to observe the variation of this increase in different places. It has generally been supposed that the heat is greater in the vicinity of volcanoes, and the low rate of increase at Columbus—a long distance from volcanic action, in part verifies this opinion.

Wagon and Carriage Makers, who are not already aware of the fact, will be glad to learn that there is published in this City a very good journal devoted especially to their calling, viz.: the "N. Y. Coach Makers' Magazine." It is now in its 3d volume, and is well worth the attention of those interested in this branch of business. E. M. Stratton, Publisher, 106 Elizabeth-St.

Agricultural Scrap Book.—C. S. Keep, Portland Co., Conn., suggests that an Agricultural scrap-book, to contain pieces occasionally found in other than agricultural papers, would be valuable. Occasionally items of importance appear in local papers, but there is so much nonsense published in these fugitive paragraphs that they would form an unreliable guide. As a matter of curiosity, and for occasional reference, it would be interesting. A good agricultural paper, with a character to sustain, will be a found the safest counsellor.

The Age of Horses, as is well known, is determined by the appearance of the teeth. It is difficult, except after long practice, to judge accurately after the animal has passed his ninth or tenth year ; the directions laid down in the books, are not very clear on this point. A little work of 47 pages on this subject, just published by Louis Brandt, a German Veterinary Surgeon, professes to give infallible marks by which to tell the age of a horse up to twenty years or more. It is abundantly illustrated with drawings, and if it prove reliable, will be well worth the price asked, $1 per copy.

Every Body's Lawyer, by Frank Crosby, Phila., 1860.—12 mo. 384 pp. This work contains plain and simple instructions for transacting business according to law, with legal forms for drawing the necessary papers. Its instructions are calculated to keep its readers out of law.

Veterinary College at the West.—Dr. Geo. H. Dadd, Veterinary Surgeon, and one of the editors of the American Stock Journal, recently called on us, on his way to the West, where it is proposed to establish a Veterinary College—probably at Cincinnati, O. We commend the enterprise to the hearty co-operation of our Western friends.

How much is a "Horse Power."—Daniel Evans, Wood Co., O. In estimating the power of engines, one "horse power" is taken as equivalent to a force sufficient to raise 33,000 lbs. one foot in one minute. This standard was first adopted by the English engineers, Bolton and Watt.

Weather Notes from the Cherokee Nation.—I. B. Hitchcock, of Cherokee Nation, west of Arkansas (latitude 36°), sends weather notes kept through Jan., Feb., March, and a portion of April. The notes were made at sunrise, and during Jan. the mean temperature was 30¼°—lowest 8°, and highest 61°. The mean for Feb. was 31½°.—lowest 5°, highest 56°. For March, the mean was 38¼°—lowest 18°, highest 62°. Snow had fallen six times and it had rained ten times.

Connecticut Pins.—J. Mix, New-Haven Co., Ct., sends samples of pins manufactured by the American Pin Co., which appear to be all that is needed in a pin—neat, solid heads, and needle like points. Most of the pins heretofore made, have had too blunt a point.

* * *

The Hydropult.

This instrument described in the August *Agriculturist*, page 236, is evidently gaining in favor with the public. Our commendation might seem to be partial, the company being our tenants, but we have no interest whatever in its manufacture or sale. The following extracts will show how highly it is approved by others.]

From the New-York Daily Tribune.

Fire at the American Institute Fair. It may be remembered that on the night of the 5th of October, 1858, the Crystal Palace, in which the annual fair of the American Institute was being held at the time, caught fire by some accident and was completely destroyed. Singular to relate, on the night of the 5th of this October, last Friday at the same hour, and under almost similar circumstances one of the main buildings in which the Institute Fair was being held at Palace Garden, took fire, and very narrowly escaped destruction. The Janitor was lighting the gas, when he accidently ignited some fancy festoonings in the hall ; and in an instant the flames were overleaping each other in all directions, and at such a hight that it was impossible to throw water on them by ordinary means. Fortunately for the exhibitors and visitors, one of the articles on exhibition at the time was Vose's Hydropult, a pump with hose and suction pipe attached—so light that it can be carried about by a child—yet capable of drawing the water from a pail, tub, or reservoir, and sending it to a great hight. One of the waiters in the refreshment saloon seized this little force-pump and threw several pails of water through it up to the fire, and extinguished the flames in a few minutes. Had it not been for the Hydropult, the entire building and all its valuable contents must have been consumed. The managers of the fair awarded the highest medal to the American Hydropult Company, in recognition of the valuable service which it rendered them in this emergency.

From the Journal of Commerce.

HOW PALACE GARDEN WAS SAVED FROM FIRE.

American Institute,
New-York, October 13, 1860.

To the American Hydropult Company.

In compliance with the request of one of the officers of the Company, I take great pleasure in certifying to the efficiency of the hand engine, or portable pump, which you see proper to call the "Hydropult," or water thrower.

At the late fair of the Institute, at Palace Garden, in lighting the gas for the evening, fire was communicated to some light combustible ornaments, and the flames quickly communicated to the canvas and board ceiling of the roof. The roof was so high that there were no means of reaching the fire by ladders, or otherwise, and one of your hydropults being on exhibition, it occurred to one of the floor clerks of the exhibition to bring it into use.

With a single pail of water, and this little instrument, the fire was almost instantly extinguished. It was the general impression that three or four minutes' delay would have resulted in the certain destruction of the building, and all present concurred in the opinion—or rather in the certain conviction—that the Hydropult saved the Institute from a similar calamity which on the same day of the month, two years before, laid the Crystal Palace in ashes.

Very respectfully, THOMAS McELRATH,
Corresponding Secretary American Institute.

* * *

From the New-York Dispatch.

Sewing Machines.—Which is the best?—The Question Answered.—There can be no doubt that Wheeler & Wilson's Sewing Machine is the very best the market affords. Everybody says so, and that a large majority of people *prefer it for family sewing*, while Dress-Makers, Shirt-Makers, Corset-Makers, Gaiter-Fitters, Shoe-Binders, Vest-Makers, and Tailors, all use it, and insist there is no equal for *their* purposes, clearly establishes the fact that it is unequalled for the variety of uses to which it is adapted. The Wheeler & Wilson Machines make the lock stitch, *the only stitch that cannot be raveled*, and that presents the same appearance on both sides of the seam—a fact of itself sufficient to account for its having the highest premiums awarded it at all the State fairs held for the past few years. No other than the Lock-stitch has given such universal satisfaction, and our advice is, if you want a Sewing Machine that will do your own family sewing *in a very superior manner*, or if you wish to earn a livelihood by sewing for others, do not get any other than a Wheeler & Wilson Machine, and you will then feel certain that you have one that will give you the fullest satisfaction.

Business Notices.

☞ *Sixty Cents a Line-of Space.*

SANFORD'S CHALLENGE HEATERS,

PORTABLE AND SET IN BRICK, ARE PRONOUNCED by the most competent judges, to be *the best* in market, giving the *largest amount of* heat with *the least fuel*, owing to their being so constructed as to *burn the gases and smoke*, and with *extensive radiating surface*, arranged to warm the air rapidly to *a soft Summer heat.* Eight sizes, adapted to warming one or two rooms only, or a *whole house*, CHURCHES, ACADEMIES, PUBLIC HALLS, etc., etc. *Send for book of description and testimonials* from some of the *most respected citizens* of New-York and elsewhere.

THE CHALLENGE AIR-TIGHT KITCHEN RANGE,

suited equally to wood or coal, *burns the gases and smoke, sifts its ashes*, has eight openings for boiling, BROILS WITHOUT BURNING OR SMELL OF SMOKE, *and without interrupting boiling;* OVENS unusually large, yet BAKING QUICKLY and *well at the bottom;* flues very deep, and easily cleaned; water backs, if desired; CASTINGS EXTRA STRONG. Three sizes. A PREMIUM over all others, *was awarded* at the late NEW-JERSEY STATE FAIR.

COSMOPOLITE GAS-BURNING AIR-TIGHT PARLOR RADIATOR AND VENTILATOR.

This beautiful stove is all its name denotes. By an ingenious, yet simple arrangement of flues, it is so contrived as effectually to burn the gases and smoke, *filling the interior with a brilliant blue blaze*, and radiating the heat so completely, *that the bottom of the stove is as hot as any other part.*

Besides this, there is a very convenient contrivance invented expressly for this stove, whereby the *perfect combustion of the coal is secured, with great economy, and at the same time the impure air is drawn out of the room.* FIRE MAY BE KEPT ALL WINTER WITHOUT GOING OUT.

SANFORD, TRUSLOW, & CO.
239 and 241 Water street.

Manufacturers also of a great variety of Cooking and Heating Stoves, adapted to every want.

WHEELER & WILSON'S SEWING MACHINES.

Are not only intrinsically "The best in use," but are the only machines that meet all the wants of the public. They are the favorites for family use, are preferred for shirt making, vest making and tailoring purposes generally, and much esteemed at the South, for plantation work, where the sewing ranges from the finest to the coarsest fabrics.

"There is no better family machine than this made, as we have proved by nearly three years' use in our own family. We want no better."—*American Agriculturist*, September, 1860.

Office, 505 Broadway, New-York
SEND FOR A CIRCULAR.

GROVER & BAKER'S
CELEBRATED NOISELESS
FAMILY SEWING MACHINES,

No. 495 Broadway, New-York; No. 18 Summer street, Boston; No. 730 Chestnut st., Philadelphia; No. 181 Baltimore st., Baltimore, No. 58 West Fourth st., Cincinnati. * * *For our own family use* we became *fully satisfied that Grover & Baker is the best and we accordingly purchased it.—American Agriculturist.*

☞SEND FOR A CIRCULAR.☜

A SILVER MEDAL

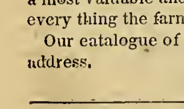
has just been awarded by the N. Y. State Agricultural Society for the

Comprehensive Farm Record;

a most valuable and curious book, arranged for recording every thing the farmer desires for 25 years.

Our catalogue of agricultural books is sent free to any address.

SAXTON & BARKER,
25 Park Row, New-York.



TRUSSES.—DR. MARSH CONTINUES to apply his radical cure Truss with success in the treatment of Hernia, or Rupture. Trusses, Supporters, Shoulder Braces, Suspensory Bandages, silk elastic Stocking, Belts, Bathing Trusses, and all surgical appliances applied. A lady in attendance in the female department. No. 2 Vesey-st., Astor House, opposite St. Paul's church.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Friday Evening, Oct. 19, 1860.

Our market report for the present month is more satisfactory than any one we have been able to make for at least two years past. As we intimated in a leading article on the crops, last month, the continuous reports of bad weather in England, have not been without some foundation, as many dealers were trying to hold out was the case, at the time our article was written. Later advices show a marked deficiency in the wheat crop of Great Britain, and the export of grain and flour is now going on at a very rapid rate. The shipment of wheat from the port of New-York for the week ending Oct. 13th, was greater than during any previous week in the history of our country. Prices have of course advanced both here and in the interior of the country, and we are happy to be able to report most encouraging prospects for farmers.

It is a noticeable feature in the market that flour has not advanced in the same ratio with wheat. The rise on the former has been but 15 to 25 cents per barrel, while wheat has gone up 10c. to 15c. per bushel, equal to an improvement of 50c. to 75c. per bbl. for flour. Hence, it is obvious that millers who continue to manufacture flour, are working at a loss. Toward the close, holders of flour are beginning to realize more satisfactory prices, and it is not at all improbable that the future will more nearly equalize the relative value of the raw material and the manufactured article. The exports of both have been very heavy indeed, and extensive shipments continue to be made, chiefly, of course, to British ports. It is worthy of remark, in this connection, that California, heretofore an importer of Breadstuffs, has this year become an exporter, and a surplus is now being shipped to Australia, Great Britain, and to New-York, reversing, so far as this port is concerned, the course of trade. It will be observed by examining our tables, given below, that in Corn, a decrease of receipts and sales has taken place. Prices, however, are higher. Although there is a very large stock, especially of mixed Western, in store, it is being reduced very rapidly, the current sales being much heavier than the arrivals. Rye has been scarce and wanted. ....Barley has been more plenty and more active, at an improvement....Oats declined early in the month, but are now rising again, the inquiry for them being good.... With unfavorable crop accounts from the South, and an active demand here, prices of Cotton have advanced about ½c. per lb., closing with Middling Upland at 11¼c., and other grades at proportionate rates per lb. The recent unfavorable change in the weather, together with moderate receipts and improving accounts from Liverpool, have stimulated business in all our markets. The demand has been chiefly for Middling and the upper grades, which, owing to their scarcity, have brought higher rates than could probably be supported should the weather again become favorable. Local speculation has already partially discounted the effect of a killing frost. The selection at present on the market is deficient in quality and staple, but the later pickings are expected to show an improvement in these respects....Hay and Hops have been in active request, and the latter have advanced.... Tobacco has been in lively demand at somewhat firmer prices....Seeds have been more sought after....Wool has been quiet at unchanged quotations....The movements in other kinds of Produce have been moderate.

CURRENT WHOLESALE PRICES.

	Sept. 19.	Oct. 18.
FLOUR—Superf to Extra State.	$5 15 @ 5 60	$5 40 @ 5 75
Superfine Western	5 15 @ 5 39	5 40 @ 5 55
Extra Western	5 40 @ 7 00	5 65 @ 7 25
Fancy to Extra Genesee	5 65 @ 7 00	5 80 @ 7 25
Super. to Extra Southern.	5 70 @ 7 50	5 90 @ 7 75
RYE FLOUR—Fine and Super.	3 50 @ 4 30	3 50 @ 4 30
CORN MEAL.	3 35 @ 3 90	3 50 @ 3 90
WHEAT—Canada White	1 36 @ 1 43	1 48 @ 1 59
Western White	1 30 @ 1 50	1 46 @ 1 60
Southern White	1 35 @ 1 52½	1 47½ @ 1 62½
All kinds of Red	1 12 @ 1 34	1 22 @ 1 40
CORN—Yellow	68 @ 70	74 @ 77
White	70 @ 80	None selling.
Mixed	66 @ 66½	71½ @
OATS—Western	39 @ 40½	38½ @ 39½
State	40 @ 41	39½ @ 40
Southern	36 @ 39	37 @ 39
RYE	79 @ 80	80 @ 81
BARLEY	70 @ 80	77½ @ 85
HAY, in bales, per 100 lbs	70 @ 1 00	75 @ 1 60
COTTON—Middlings, per lb	10¾ @ 11	11¼ @ 11½
RICE, per 100 lbs	4 00 @ 5 00	4 00 @ 4 87½
HOPS, crop of 1860, per lb	15 @ 29	38 @ 37½
PORK—New Mess, per bbl	19 00 @ 19 12	18 81 @ 18 87
Prime, new, per bbl	14 00 @	14 37 @ 14 50
BEEF—Repacked mess	9 00 @ 9 75	8 75 @ 9 25
Country mess	5 00 @ 6 00	5 00 @ 6 00
LARD, in bbls., per lb	12¼ @ 13¼	12¼ @ 13
BUTTER—Western, per lb	12 @ 17	11 @ 15
State, per lb	16 @ 22	15 @ 20
CHEESE	9½ @ 11½	9 @ 11
EGGS—Fresh, per dozen	13½ @ 15	
Western, per doz	10 @ 14	
POULTRY—Fowls, per lb	13 @ 14	8 @ 10
Chickens, per pair	62 @ 75	44 @ 62
Geese, per pair	1 00 @ 1 50	1 25 @ 1 50
Ducks, per pair	38 @ 50	56 @ 75
Turkeys, per lb	12 @ 14	10 @ 12
Partridges, ℔ pair		63 @ 75
Wild Pigeons, ℔ doz		1 25 @ 1 50
FEATHERS, Live Geese, p. lb	44 @ 52	47½ @ 55
SEED—Clover, per lb	9 @ 9½	9 @ 10
Timothy, per bushel	2 25 @ 2 75	2 65 @ 2 75
SUGAR—Brown, per lb	6 @ 8¼	6¼ @ 8½
MOLASSES, New-Orleans, p.gl.	45 @ 49	45 @ 48
COFFEE, Rio, per lb	13¼ @ 15¼	13 @ 15¼
TOBACCO—Kentucky, &c, p.lb.	3 @ 12	3 @ 13
Seed Leaf, per lb	6 @ 25	6 @ 25
WOOL—Domestic fleece, p. lb.	34 @ 58	34 @ 58
Domestic, pulled, per lb	28 @ 48	28 @ 48
HEMP—Undr'd Am., per tun	150 @ 160	150 @ 169
Dressed American, per tun.	200 @ 220	200 @ 220
TALLOW, per lb	10 @	@ 10
OIL CAKE, per tun	31 75 @ 39 00	32 60 @ 40 00
APPLES, Prime, per bbl	1 25 @ 1 50	1 50 @ 2 00
Medium, ℔ bbl		1 00 @ 1 25
Common, per bbl	75 @ 1 00	50 @ 1 00
PEARS, Virgalieus, per bbl		10 00 @ 15 00
Common, per bbl	1 25 @ 2 25	3 00 @ 4 00
GRAPES—Isabella ℔ lb		5 @ 9
Dried Apples, per lb	4½ @ 5	3½ @ 5
Dried Peaches, per lb	8 @ 12	10 @ 15
Dried Cherries, pitted, pr. lb.	19 @ 20	17 @ 18
POTATOES—Mercers, per bbl.	1 87 @ 2 25	1 25 @ 1 75
Junes, per bbl.	1 37 @ 1 50	1 00 @ 1 25
Dyckman, per bbl	1 50 @ 1 62	1 25 @ 1 50
Peach Blows, ℔ bbl		1 12 @ 1 37
Sweet, Virginia, per bbl	2 00 @ 3 00	2 00 @ 2 25
Delaware and S.Jersey, ℔ bbl.		1 75 @ 2 50
ONIONS, Red, per bbl	1 75 @ 2 00	2 00 @ 2 50
White, per bbl	1 75 @ 2 75	1 75 @ 2 00
TURNIPS, per bbl	1 25 @	75 @ 1 12
CABBAGES, per 100	2 00 @ 3 00	2 50 @ 3 50
SQUASHES, Marrow, per bbl.	1 00 @ 1 25	75 @ 88
BEETS, per bbl	1 00 @	1 00 @
TOMATOES, per bushel	50 @	38 @ 50
LIMA BEANS, per bushel	56 @ 75	1 00 @
CRANBERRIES, Eastern, ℔ bbl.		9 00 @ 12 00
Western, ℔ bbl		6 00 @ 8 00
CELERY, ℔ dozen		75 @
PUMPKINS, ℔ 100		4 00 @ 5 00

TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats*
26 days *this* month	578,791	3,741,262	789,626	23,413	149,412	344,930
27 days *last* month	425,371	2,711,792	2,014,863	32,167	22,411	399,526

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
26 business days *this* mon.,	588,670	3,877,200,	1,367,500	60,250	297,350
27 business days *last* mon.,	553,130	3,374,000	2,658,000	52,600	12,350

Flour, Wheat, Corn, and Barley left at tide-water from the commencement of navigation to the 15th of October inclusive, during the years 1859 and 1860, are as follows:

	Flour, bbls.	*Wheat, bu.*	*Corn, bu.*	*Barly, bu.*
1859	364,517	1,748,523	2,293,056	667,809
1860	720,355	9,702,071	12,193,060	943,744
Increase	355,838	7,953,548	9,900,004	275,935

It will be seen that the increase in Flour, Wheat, and Corn, is enormous.

Breadstuffs Trade of Chicago, Jan. 1 to Oct. 10.

	RECEIPTS.		SHIPMENTS.	
	1860.	1859.	1860.	1859.
Flour, bbls	414,581	453,668	443,918	370,299
Wheat, bush	9,948,298	5,602,001	8,192,862	4,495,855
Corn, bush	14,271,632	4,091,910	12,495,260	3,355,319
Oats, bush	1,268,523	955,261	845,758	684,507
Rye, bush	207,422	147,880	72,629	68,787
Barley, bush	371,177	311,710	129,785	134,219

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been very largely supplied, the receipts footing up 22,422 for the four weeks ending Oct 16th, or 5,605 per week—the highest average for any one month during two years past, at least, but so great has been the rush of visitors to this city, that about all have found a market, at only a slight decline from one month ago. For the last market there were 5,908 beeves, which sold rather slowly, at 9¼ c. @ 9¾ c. for prime grades; 8¼ c. @ 8¾ c. for fair to good, and so down to 6 c. @ 7 c. for the very poor; general average 7¾ c. per lb. estimated dressed weight.

VEAL CALVES.—Receipts have been light, numbering but 2,769 for the past four weeks. The demand is fair, for good fat calves of four to six weeks old, for which 6½ c. @ 7 c. per lb. live weight is readily obtained; but much of the stock is heavy, and rather poor, selling at 4 c. @ 5 c.

SHEEP AND LAMBS are abundant.—Receipts for four weeks foot up 58,727 or an average of 14,682 per week. This is a large number at a time when dressed sheep are coming in plentifully, and it is difficult to sell the whole of them. Good fat sheep and store ewes command fair prices and sell readily, the former at about 4½ c. @ 4¾ per lb. live weight, and the latter at $3.25 @ $3.75 per head. Common and poor lambs are in over supply, and sell quite slowly at $2. @ $2.50 each.

LIVE HOGS.—Receipts for the month just ended, have been 40,954 or 10,274 per week, just double what they where the previous month. With the return of cool weather the demand has so increased that nearly all the stock has been sold and that too without the aid of packers. Prices about as reported last month, or 6⅛ c. @ 6⅝ c. per lb. live weight for corn fed hogs; and 6 c. @ 6¼ c. for still fed hogs. The market is overstocked just now, 14,302 live hogs having been received during the past week.

The Weather, since our last report has been quite changeable, but generally cool, with heavy frosts, and even snow, at the north. Most crops have matured well, and been secured in good condition.—-Our DAILY WEATHER NOTES, condensed, read thus: *September* 20 rainy A.M. cloudy P.M., and hard rain at night—21, to 24, clear, cool, fine weather—25. heavy shower—26, clear, and cool—27, cloudy, cool, with light rain at night—28, to 30, clear and cool.—*October* 1, coldest morning of the season; mercury 38° with hard frost; rainy day—2, 3, clear and milder—4, rain P. M. and at night—5 cloudy with light rain—6, 7, clear and cool—8, high wind, with rain—9 to 13, clear and fine—14, cloudy A.M. heavy rain P.M.—15, 16, clear and cool—17, cloudy—18, mild—19, clear fine autumn weather.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.) *r* indicates rain.]

SEPTEMBER.

1	62	7	68	13	50	19	66*r*	25	63*r*
2	57	8	71*r*	14	53	20	66*r*	26	55
3	59	9	55	15	57	21	57*r*	27	51*r*
4	57	10	51	16	59	22	52	28	50*r*
5	64	11	58*r*	17	64*r*	23	58	29	43
6	69	12	55*r*	18	63	24	60	30	43

OCTOBER.

1	44*r*	4	52*r*	7	40	10	49	13	44
2	58*r*	5	59	8	53*r*	11	60	14	47*r*
3	54	6	52	9	44	12	50	15	40

PREMIUMS FOR 1861.

Vol. XX.

(Subscriptions to the American Agriculturist for 1861 *can begin now without extra charge.—See page* 352.)

After close figuring, and liberal terms from manufacturers, we find we can fully keep up the character of our paper, and even *improve* it, and yet offer you the large premiums named below. These articles are offered as direct pay for time spent in canvassing for names. *This year we make no distinction between new and old subscribers*, though it is supposed that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞In selecting articles for premiums, we have aimed to get such as are *useful* and as have been most frequently called for by our readers. ☞WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing for competition. Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he, or she, is working for ; and also that if a higher premium is not secured, a lower one can be taken.

☞ The work of collecting names can begin *now* with special advantage. See last page (352) for extra inducements to new subscribers.

☞ Any extra specimen copies, or show bills, needed by canvassers, will be freely furnished. We have now a good show bill for 1861.

☞Of course only one premium can be paid on the same subscriber.

☞ Every person collecting names for premiums, can send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers ; but if designed for premiums, two copies of each list of names should be sent, one of them marked at the top, "For premiums," also with the name of the sender. These duplicate lists will be kept on file by themselves, to be referred to in making up the premium when any person has completed sending in names for Volume XX.

☞ The premiums are offered for subscribers for Volume XX (1861), whenever received. Canvassers will have time for completing their lists, but the premium will be paid as soon as any list is made up—if duplicate lists are sent, to refer to at once.

☞No premium is sent till *specifically asked for*, as we have many friends who send in large lists but will take no premium, and we are not certain that premiums are desired, unless the fact be particularly mentioned.

☞ It is believed that all can recommend this journal to their friends and neighbors, and urge them to take and read it. It will continue to be independent, outspoken, and reliable, the special friend, advocate, and promoter of the farmer's interest, and will aim to facilitate and lighten the labors of every household. A larger number of instructive as well as pleasing engravings, and a greater amount of really useful information, will be given in the next volume, than in any preceeding one. *Onward, upward*, is our motto.

☞ Premiums **A**, to **J**, are offered for subscribers at the lowest club price (80c.), or at the regular price ($1) Any person who has commenced sending in names at 80c. and who finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

Premium A.

140 Subscribers at 80 cents each, (or **95** at $1 each,) will entitle the person getting up the club to one of *Wheeler & Wilson's* best **$50 Sewing Machines,** new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly three years' use in our own family. We want no better.—The machines will be selected new at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

Premium B.

130 Subscribers at 80 cents each, (or **90** at $1 each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopædia**, now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Ten volumes are now ready, and the remaining five will be furnished as fast as issued. Price, $45.

Premium C.

98 Subscribers at 80 cents each, (or **69** at $1 each,) will entitle the person getting up the club to one of *Willcox & Gibbs'* **$35 Sewing Machines,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread), and has several points superior to other machines. It is neat, well made, simple in its operation ; and having tested one for some time past in our own family, we can recommend it to those who can not afford to buy the higher priced double-thread machines. (The regular price of this machine is $30, but we have included in our offer $5 extra for the set of *Hemmers*, because those used with this machine are very simple and effective, and should go with every machine sent out.) The machines given as premiums, will be selected new at the factory, be well boxed, and will be forwarded to the recipient free of expense, except for freight after leaving the city. They will go out set up ready for use, with printed directions for operating.

Premium D.

65 Subscribers at 80 cents each, (or **32** at $1 each,) will entitle the person getting up the club to one of the New **$10 Wringing Machines,** described on page 247 of the August *Agriculturist*. This is one of the best labor-saving and clothes-saving inventions of the day, and we unhesitatingly say that it will pay to have one to assist in the washing of every family, even if of only moderate size. We would not take $50 for our machine, if another could not be purchased.

Premium E.

60 Subscribers at 80 cents each, (or **30** at $1 each,) will entitle the person getting up the club to one of Kendall's **Aneroid Barometers,** described on page 232 of the August *Agriculturist*. This is a good, portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. (Price $10.)

Premium F.

50 Subscribers at 80 cents each, (or **26** at $1 each,) will entitle the person getting up the club to one of the best **$8 Straw and Hay Cutters.** [If preferred, the best $8 **Subsoil Plow** (two-horse) will be given.]

Premium G.

42 Subscribers at 80 cents each, (or **22** at $1 each,) will entitle the person getting up the club to the new and enlarged $6½ *Pictorial Edition of* **Webster's Unabridged Dictionary.** This standard work comprises **1748** large 3 column pages. It is not only an ornament to every house, but is of great practical use ; and its full definitions place it next to the Cyclopædia as a source of general information. It weighs 8½ lbs., and can go by express; or be sent by mail for 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium H.

40 Subscribers at 80 cents each, (or **21** at $1 each,) will entitle the person getting up the club to one of the best **$6½ Hand Corn Shellers,** a convenient, effective, and useful implement.

Premium I.

30 Subscribers at 80 cents each, (or **16** at $1 each,) will entitle the person getting up the club to one extra copy of Vol. XX, and also to the **4** previous unbound **Volumes** of the *American Agriculturist*, (16, 17, 18, 19) *sent post paid.*

Premium J.

26 Subscribers at 80 cents each, (or **14** at $1 each,) will entitle the person getting up the club to a $4 **Pocket Microscope,** with the celebrated "hour-glass," or Coddington lens, in a solid silver case. Sent post-paid.

Premium K.

25 Subscribers at 80 cents each, will entitle the person getting up the club to an extra copy of Vol. XX, and also to any *three* of the unbound volumes 16, 17, 18, and 19, sent post-paid. ☞**20** Subscribers at 80 cents each, to an extra copy of Vol. XX, and *two* of those volumes. ☞**15** Subscribers at 80 cents each, to an extra copy of Vol. XX, and *one* of the previous volumes.

Premium L.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid anywhere within 3000 miles. (If to go to the British Provinces or the Pacific Coast, the recipient will need to send 84 cents for the extra postage required above the 6 cents per ounce which we pay. This and the next premium, if sent with our box of seeds, going to California in February, can go without the extra postage.

Premium M.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a mahogany case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, they will answer for ordinary practice by children or beginners, and for common sketching. They will also be sent by mail, post-paid. (If to go to the British Provinces, or to the Pacific Coast, $1,05 will need to be sent by the recipient to pay the extra postage above 6 cents per ounce.)

Premium N.

10 Subscribers at 80 cents each, will entitle the person getting up the club to any *one* of the four previous unbound volumes (16, 17, 18, 19,) sent post-paid.

Premium O.

237 Subscribers at 80 cents each (or **125** at $1 each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one (costing $150) for two years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums will be sent new directly from the factory at Buffalo, ready boxed, and without extra expense to the recipient, except for freight after leaving the factory.

☞The above premium list might be made up by the members of a congregation, and an instrument thus secured for a church.

Premium P.

182 Subscribers at 80 cents each (or **105** at $1 each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$60 Melodeons** (4½ octaves.) See remarks above.

Premium Q.

130 Subscribers at 80 cents each (or **90** at $1 each), will entitle the person getting up the club to one of *Geo A. Prince & Co.'s* **$45 Melodeons** (4 octaves.) See remarks above.

Book Premiums.

Valuable Book Premiums.—Instead of the above premiums, any person getting up a club of 20 or more names, may choose any desired Books from the list (advertised on page 350) *to the amount of* 12½ *cents for each name forwarded at* 80 *cents*, (or 32½ cents for each name sent at $1,) and the books will be sent post-paid. (If to go over 3000 miles, the recipient will need to send 20 cents for extra postage on each dollar's worth of books.

☞Persons making up a club for any of the above premiums, and getting some names over the required amount, will be entitled to books for the surplus names.

Eight Men,

Happened to be together one evening, and on looking over our premium list, they resolved to each obtain twelve subscribers to it, and thus secure a good sewing machine to be given to a poor but worthy widow in their neighborhood. They found many willing to pay a dollar each, and even more, when by so doing they not only secured a good paper for themselves, which they had before thought of subscribing for, but also at the same time helped an unfortunate neighbor. In many other neighborhoods a similar course has been pursued At least two tailors, with large families, were remembered in the same way, last winter.

To Advertisers.—Terms Advanced.

By referring to the terms of Advertising, it will be seen that the rates are somewhat advanced. This has become necessary, to prevent their over-running the reading columns. We were compelled to refuse a large amount offered for the present paper. Further, the large increase in our circulation renders this advance of terms quite proper. Our charges will still be *lower than most, if not all other Journals.* The correct mode of estimating advertising rates is by *the amount per line for each thousand of actual circulation.* Our new terms will be little, if any, over half a cent per line for each thousand copies of the *Agriculturist* circulated. We invite a comparison of these rates with those of any other journal of known circulation. Still further, the limited space we give to advertisements, the exclusion of medicines, humbugs, and unreliable advertisements, and the monthly issue of the paper, all contribute to make our advertising pages unusually valuable.

Free Seeds for 1861.

As in former years, we shall provide a large assortment of valuable Seeds to distribute *without charge* to every subscriber desiring them. The seeds will consist of various kinds, for the Field, Garden, and Flower Plots. The list will be announced as soon as we can get our collection together. These seeds will often be worth more than the cost of a year's subscription, especially in distant parts of the country, remote from reliable seed stores.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.

Fifty cents per line of *space* for each insertion.
One whole column (145 lines), or more, $60 per column.
☞Business Notices, *Eighty cents* per line of space.

FOR THE GERMAN EDITION ONLY.

Ten cents per line of *space* for each insertion.
One whole column 130 lines), or more, $10 per column.
☞Business Notices, *twenty* cents a line.

FOR BOTH EDITIONS, ENGLISH AND GERMAN.

Fifty five cents per line; $65 per column.
☞Business Notices *Eighty-five* cents per line.

VALUABLE FARM FOR SALE. Known as the "Colden Mansion Farm," situated in Coldenham, Orange County, N. Y., 7 miles west from Newburgh. The house is fifty feet square, two stories high, basement, kitchen, and built of stone. There is a farm house and tenant house also on the place, together with carriage houses, barn, hay houses, &c., &c. A great variety of the choicest kinds of fruit and ornamental trees. A very desirable place for a gentleman farmer; as healthy a location as can be found. It contains 217 acres. For further information apply to LINDLEY M. FERRIS, on the premises; and to L. Murray Ferris, Jr., at D. Colden Murray's, 62 South-st.; or Clarkson Taber, at the office of American Agriculturist, Times Building.

FARM $7000.—IN HAND $500; REMAINDER in 6 annual payments. 22 miles from Cincinnati, O., 160 acres, 600 fruit trees, 80 acres cleared. Good House, Kitchen, &c. Immediate possession. A desirable situation for a milk or market farm, or vineyard. Address, FARM, care of Box 3349, New-York City. Will exchange for real estate in or near New-York.

TO NURSERYMEN AND FARMERS. FOR SALE (in whole or in part,) TWO HUNDRED AND FIFTY ACRES OF GOOD LEVEL LAND, near the city of Baltimore, and convenient to a turnpike. It is admirably adapted for an extensive Nursery, which is very much needed, as thousands of orders are annually sent to the North for Trees, &c., which would seek a supply nearer home. For particulars address

JOHN I. GROSS,
Real Estate Agent,
Baltimore, Md.

A VALUABLE FARM FOR SALE OF 330 acres of choice land, 200 under good improvement, 2 dwellings (1 of brick,) 2 large barns, 2 orchards of apples, 1 of pears, plums, cherries, quinces, &c., &c.; 1½ miles from Railroad station, 20 miles north of Detroit by Plank-road. Or half would be sold to suit purchaser. Price $12,000. If divided, $6000 and $7000.

Address E. WRIGHT HALL,
Mt. Clemens, Macomb Co., Mich.

FARM PRODUCE
Sold on Commission,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.

ISAAC EMENS, 226 Front-st., New-York.
(SUCCESSOR TO THE FIRM OF HAIGHT & EMENS.)
Refers to the Editor American Agriculturist.
" E. R. Cooper, Cashier Market Bank, New-York.

STONE DIGGING MACHINE.—3 men with 2 yoke of oxen will take rocks of 5 tons weight out of their beds without digging; remove and place them in a wall 5 feet high at the rate of 150 per day. For sale by

R. L. ALLEN, 189 & 191 Water-st., New-York.

HYDROPULT.—One man can throw water 50 feet high, at the rate of 50 Gallons per minute. For sale by

R. L. ALLEN, 189 & 191 Water-st., New-York.

Blackberries—Grapes.

NEW-ROCHELLE BLACKBERRY VINES at $40 per thousand,
" " " or $5 per hundred.
CONCORD GRAPE VINES—1 year old, at $15 per 100.
" " " —2 years old, at $20 per 100.
" " " —Layers (1 year old) at $25 per 100.

IRA SEYMOUR,
South Norwalk, Conn.

Strawberries! Strawberries!!

"By their fruits ye shall know them."

What Strawberry shall I plant? Why! the Wilson's Albany—Why? Because it is the most productive, the largest, and finest berry out. In fact it is the "fashionable" berry.

Originated at the Albany Nursery, where plants can be procured by addressing JOHN WILSON, Albany, N. Y.

Price per 100 plants	$1
do 1000 do	8

Liberal discount to the trade.

Garden Seeds,
GARDEN SEEDS,
GARDEN SEEDS.

The utmost care is taken to have my Seeds pure, reliable and true to their kind—most of which are grown expressly for my sales.

The orders of dealers solicited for Seeds in papers or in bulk—which will be furnished on as good terms as by any other reliable house in the country. Wholesale price lists will be sent by mail on application.

R. L. ALLEN,
189 and 191 Water st., New-York.

TREES. TREES.

FRUIT FOR SUMMER
AND
A GARDEN FOR WINTER.

PARSONS & CO.,
FLUSHING, near New-York.

Invite the attention of dealers and private growers to their large stock of well grown and thrifty fruit trees, at greatly reduced prices.

APPLE TREES—Standard—Of fine size. $14 per 100.
APPLE TREES—Dwarf.
PEAR TREES—Standard—All the desirable sorts. $30 per 100.
PEAR TREES—Dwarf—Three to four years old. $30 per 100.
PEACH TREES—on Peach Stock—One and two years old. $10 per 100.
PEACH TREES—on Plum Stock—Pruned for Pot Culture.
CHERRY TREES—Two years old, of the best varieties and very thrifty, $20 per 100.
CHERRY TREES—Early Richmond. $15 per 100

GRAPE VINES—Native:

Diana, Delaware, Logan, Rebecca, Anna, Hartford Prolific, and all the other desirable sorts. For prices see Catalogues.

GRAPE VINES—For House Culture:

Black Hamburg, and all the best varieties, grown in large pots, with special reference to the formation of roots. For prices see Catalogues.

RHUBARB—Linnæus at $50 per 1000, and all other good sorts at low prices.

CURRANTS—All the best sorts, at $5 per 100 and upwards.

RASPBERRIES, STRAWBERRIES, GOOSEBERRIES, BLACKBERRIES, &c.

For Orchard Houses.

PEACHES, PEARS, PLUMS, NECTARINES, CHERRIES, and APRICOTS, in Nursery rows, carefully pruned for Pot culture. $1 each, $80 per 100.

THE SAME FRUITS IN POTS a foot in diameter, and ready for immediate fruiting, $2 each.

FOR THE LAWN, GARDEN, OR PARK.

All the well known Deciduous Trees and Shrubs, as Maples, Oaks, Lindens, &c., and a large number of new and beautiful varieties gathered by their collectors, brought from Europe by one of the proprietors.

They would call attention to their large variety of rare and beautiful EVERGREENS for a

WINTER GARDEN,

Where, instead of the leafless desolation which generally reigns seven months in the year, every gentleman may surround himself, even in the depth of Winter, with all the fresh greenness of Spring and Summer. For our climate and long Winters there is nothing that will compare with a garden of evergreens, unless it is a

GARDEN OF GLASS,

Where, in apartments of various temperatures, all the fruits and flowers of tropical climates can be grown in profusion.

To those who intend to erect such houses, we shall be happy to show our structures adapted to each class of plants, and to show also the young and thrifty saleable plants of more than a thousand varieties, from the glossy leaf and varied flower of the well known Camellia, to the more rare and curious Orchids, and the novel foliage plants, whose leaves present the delicate or gorgeous coloring of flowers, and are beautiful, not only for a short period of bloom, but throughout the whole year. For blooming under glass, or for BEDDING upon the lawn, a large variety of plants is cultivated in quantity; and for the

ROSE GARDEN,

Some five hundred of the choicest varieties have been selected, and are cultivated on their OWN ROOTS, at very low prices.

Catalogues will be furnished to all who apply by mail to

PARSONS & CO.,
Flushing, N. Y.

Andre Leroy's Nurseries,
At Angers, France.

The proprietor of these Nurseries, the most extensive in the world, has the honor to inform his numerous friends and the public, that his CATALOGUE OF FRUIT AND ORNAMENTAL TREES, SHRUBS, ROSES, SEEDLINGS, FRUIT STOCKS, &c., for the present season is now ready and at their disposal.

Apply to BRUGUIERE & THEBAUD,
51 Cedar-st., New-York.

BLOOMINGTON NURSERY, Illinois.—120 Acres FRUIT, ORNAMENTAL, AND NURSERY STOCK cheap for cash. Apple, 1 to 4 years, 1000 $25 to $95. Stocks, 1 year, selected, 10,000, $30. Gooseberry, Houghton, strong, 100 $4. Raspberry, many sorts, 100, $2 to $5. Strawberry, Wilson's, Ev. Scarlet, C. Cone, Iowa, or Washington, and others, PURE, 100, $1; 1000, $5. Tulips, 100 of 20 named sorts, Db'l and Sg'l, $4. Root Grafts, 10,000, $20; &c., &c., as per Lists Cash orders in Fall packed free.

F. K. PHOENIX.

FOR SALE.—LARGE STANDARD PEAR Trees of the choicest varieties; also, Plum, Cherry, and Apple Trees, and many kinds of Shrubbery, &c., &c.; at our Nurseries in Tioga, Tioga Co., Pennsylvania.

Tioga, Sept. 26, 1860. WICKHAM & BLOODGOOD.

GRAPE VINES.—Isabella, Catawba, and Clinton.—The subscribers being largely engaged in Grape culture, now offer to the public several thousand Vines, in lots to suit purchasers, of their own raising, with prices according to age and quality. Particular attention paid to forming vineyards.

Address DEPEW'S Nurseries, Nyack, Rockland Co., N.Y.
City reference, Mr. John W. Towt, No. 46 Beekman-st.

GRAPES! GRAPES!!—Twenty varieties of the best hardy sorts, singly, by the dozen or hundred, Send stamp for priced Descriptive Catalogue.

D. S. HEFFRON, Utica, N. Y.

New Rochelle or Lawton Blackberry Plants.

$50 per thousand.
6 " hundred.
1½ " dozen

GRAPE VINES.

Delaware, Diana, Concord, Hartford Prolific, Isabella, Rebecca.

CURRANTS.

Cherry, La Versailles, White Grape, Gondoin's White, May's Victoria, Black Naples.

GEO. SEYMOUR & CO.,
South Norwalk, Conn.

Lawton Blackberry.

PRICES, AUTUMN, 1860, AND SPRING, 1861.

Two dozen, $2—Four dozen, $3—Eight dozen $5—Eighteen dozen $10—Forty dozen, $20—100 dozen (enough for one acre,) $40. WM. LAWTON, No. 15 Wall-st., New-York.

25,000 New-Rochelle Blackberry, very low. 50,000 Apple, 5 to 9 feet, 100,000 Evergreens. Nursery Stock of all sorts. Wholesale and Retail lists on application.

J. C. TEAS, Raysville, Henry Co., Ind.

Dutch Bulbous Roots.
J. M. THORBURN & CO.,
15 JOHN-ST., NEW-YORK.

Have just received in addition to their general large importation, the following novelties of the season in limited quantities.

	Each.
New Violet Hyacinth "L'Unique,"	35 cts.
Lilium Thunbergianum Grandiflorum Siboldii, (orange crimson,) 2 feet	$1 50 cts.
Lilium Colchicum, (Szovitzianum monadelphicum,) rich yellow and spotted, 4 feet	$5 00
Lilium puniceum; this new variety has just been introduced by Dr. Siebold & De Vriese, and described as the most magnificent of the lily species.	$20 00
Smaller Bulbs of the above	$15 00
Tulipa clusiana, brilliant crimson scarlet	25 cts.
Tulipa cornuta, Chinese Tulip, curious	15 "
Tulipa gesneriana, very large, bright crimson	15 "
Iris Japonica, new, splendid, free bloomer	75 "
Iris Kæmpferi, splendid novelty from Japan, hardy.	50 "
Brunsvigia Josephina	$6 00
Brunsvigia multiflora	$6 00

We also beg to recommend the following choice

COLLECTION OF BULBOUS ROOTS.

ASSORTMENTS OF

6 Fine named Hyacinths, for pots, glasses, or open border	$1
1 Polianthus Narcissus	
2 Double Tulips	
7 Mixed Crocus	

ASSORTMENTS OF

6 Fine named Hyacinths, for pots, glasses, or open border	$2
6 Fine double Tulips	
12 Fine single Tulips,	
25 Fine Mixed Crocus	
3 Double Narcissus	
3 Mixed Iris	
2 Polyanthus Narcissus	

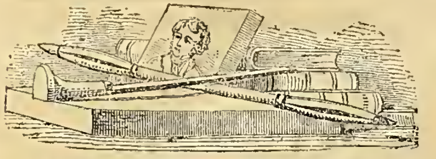
ASSORTMENTS OF

12 Double and Single Fine named Hyacinths	$5
50 Mixed Crocus	
12 Double named Tulips	
12 Single named Tulips	
3 Polyanthus Narcissus	
6 Double Narcissus	
6 Mixed Iris	
3 Crown Imperials	
2 Bulbocodium Vernums	
1 Pancratium Maritimum	

ASSORTMENTS OF

100 Varieties Double and Single Fine named Hyacinths	$16 00
100 Double and Single Fine named Hyacinths, in 50 sorts	14 50
100 Double and Single Fine named Hyacinths, in 25 sorts.	13 00
12 Our very best named Hyacinths for pots or open ground	5 00
12 Extra Fine named Hyacinths, for pots or open ground	3 00
12 First Rate named Hyacinths, for glasses or garden.	2 00
12 Mixed Double or Single Hyacinths, for open ground	1 00
50 Varieties Fine named Early Tulips, for pots or open ground	4 00
50 Varieties Fine named Late Tulips, for open ground.	5 00
50 Varieties Fine named Double Tulips, for pots or open ground	5 00

J. M. THORBURN & CO.,
15 John st., New-York.



DESIGNING AND ENGRAVING ON WOOD.

All who may desire to have designing or engraving done, will find it to their advantage to call on the subscriber, who is prepared to furnish on the most reasonable terms, and in the best style of the art, PORTRAITS, views of BUILDINGS, PLANS, &c., of Agricultural Implements, Horticultural and Scientific subjects of every description. THOMAS COX,

105 Nassau-st., corner of Ann-st., New-York.

BOOKS FOR FARMERS AND OTHERS.

[Any one of the following books can be obtained at the office of the *Agriculturist* at the prices named, or they will be forwarded by mail, *post paid*, on receipt of the price. Other books not named in this list will be procured and sent to subscribers when desired, if the price be forwarded.]

American Farmer's Encyclopedia	$4 00
American Weeds and Useful Plants	1 50
Allen's (R. L.) American Farm Book	1 00
Allen's Diseases of Domestic Animals	75
Allen's (L. F.) Rural Architecture	1 25
Allen on the Culture of the Grape	1 00
American Architect	6 00
American Florist's Guide	75
Barry's Fruit Garden	1 25
Bement's (C. N.) Rabbit Fancier	50
Blake's Farmer at Home	1 25
Boussingault's (J. B.) Rural Economy	1 25
Bridgeman's Young Gardener's Assistant	1 50
Bridgeman's Kitchen Gardener's Instructor	60
Bridgeman's Florist's Guide	60
Bridgeman's Fruit Cultivator's Manual	60
Breck's (Joseph) Book of Flowers	1 00
Buist's American Flower Garden Directory	1 25
Buist's Family Kitchen Gardener	75
Chorlton's Grape-Grower's Guide	60
Cole's (S. W.) American Fruit Book	50
Dadd's (Geo. H.) Modern Horse Doctor	1 00
Dadd's (Geo. H.) American Cattle Doctor	1 00
Dadd's Anatomy of the Horse	2 00
The Same, colored plates	4 00
Dana's Muck Manual for Farmers	1 00
Domestic and Ornamental Poultry	1 00
The Same, colored plates	2 00
Downing's Landscape Gardening	3 50
Eastwood on the Cranberry	50
Elliott's Western Fruit Book	1 25
Every Lady Her Own Flower-Gardener	50
Farm Record, for 25 years	3 00
Farmer's Practical Horse Farrier	60
French's Farm Drainage	1 00
Frugal Housewife, by Mrs. Child	38
Fessenden's American Kitchen Gardener	50
Field's (Thomas W.) Pear Culture	1 00
Fish Culture	1 00
Flint (Charles L.) on Grasses	1 25
Fruits and Fruit Trees of America (Downing's)	1 50
Grant's (Dr. C. W.) Vine Culture	1 25
Guenon on Milch Cows	60
Hall's (Miss) American Cookery	1 00
Herbert's Hints to Horsekeepers	1 25
Hooper's Dog and Gun	50
Langstroth on the Honey Bee	1 25
Liebig's Lectures on Chemistry	50
Leuchars' Hothouses	1 25
Linsley's (D. C.) Morgan Horses	1 00
Milburn on the Cow and Dairy	50
Miles on the Horse's Foot	50
Nash's (J. A.) Progressive Farmer	60
Norton's Scientific Agriculture	60
Our Farm of Four Acres	50
Pardee on Strawberry Culture	60
Pedder's Farmer's Land Measurer	50
Quinby's Mysteries of Bee keeping	1 00
Randall's Sheep Husbandry	1 25
Reemelin's Vine-Dresser's Manual	50
Richardson on Dogs	50
River's (Wm) Orchard House	40
Rose Culturist	50
Robin's Produce and Ready Reckoner	60
Shepherd's Own Book	2 00
Skillful Housewife	50
Smith's Landscape Gardening	1 25
Stephens' Book of the Farm .2 vols.	4 00
Stewart's (John) Stable Book	1 00
Talpa: the Chronicle of a Clay Farm	75
Thaer's (Albert D.) Agriculture	2 00
Thomas (John J) Farm Implements	1 00
Thomas (J. J.) American Fruit Culturist	1 25
Thompson on the Food of Animals	75
Todd's (S. E.) Young Farmer's Manual	1 25
Turner's Cotton Planter's Manual	1 00
Warder's Hedges and Evergreens	1 00
Waring's Elements of Agriculture	75
Weeks' (John M.) Manual on Bees	50
Wheat Plant	1 50
White's Gardening for the South	1 25
Yale College Lectures	50
Youatt and Spooner on the Horse	1 25
Youatt and Martin on Cattle	1 25
Youatt and Martin on the Hog	75
Youatt on Sheep	75

TWO WORKS VALUABLE TO THE SICK OR WELL.

Sent by mail, no pay expected until received, read, and approved.

Address Dr. S. S. FITCH, 714 Broadway, New-York.

1st. SIX LECTURES on the causes, prevention, and cure of Lung, Throat, and Skin diseases; Rheumatism, and Male and Female Complaints. On the mode of Preserving Health to 100 years. 360 pages, 21 Engravings. Price 50 cents, in silver or P. O. Stamps.

2nd. A work on the Cause and Cure of Diseases of the Heart, Stomach, Liver, Bowels, and Kidneys; on Apoplexy, Palsy, and Dyspepsia; why we grow old and what causes disease. 131 pages, 6 engravings. Price 36 cents. Say which book you wish giving name, state, county, town, and post office.

RUSSIA OR BASS MATS, SELECTED expressly for budding and tying, GUNNY BAGS, TWINES, HAY ROPES, &c., suitable for Nursery purposes, for sale in lots to suit by D. W. MANWARING, Importer,

248 Front Street, New York.

PROFITABLE Employment may be had by addressing (post-paid) R. SEARS, 181 William-st., N.Y

School Teachers Wanted.

The subscriber wishes to employ one School Teacher in each county of the United States, to travel and introduce the "New Encyclopædia of all Nations," and the "Pictorial New World," with Steel and Colored Engravings, Maps, Charts, &c. JUST ISSUED. Apply by letter immediately to

HENRY BILL, Publisher, Norwich, Conn.

All who want paying Employment

SHOULD engage without delay in canvassing for the NEW AGENTS' BOOKS of the AUBURN PUBLISHING CO. If you will only send us your address—an easy thing—we will return you, free, our CONFIDENTIAL CIRCULAR, containing full particulars of the business—its profits, and how to conduct it. The information, while it will cost you nothing, will offer to all competent applicants, a business worth from $1000 to $1500 PER YEAR. It is free from risk, and any one can follow it in HIS OWN TOWN OR COUNTY. It is now unusually good. Will you try it? If so, address

E. G. STORKE, Auburn, N. Y.

CANVASSERS WANTED IN ALL PARTS OF THE UNITED STATES.

Profitable Employment.

PLEASE TO READ THIS!—Agents wanted!—Extra inducements for 1861! All persons IN WANT OF EMPLOYMENT will at once receive our Catalogue of Books, pre paid, by forwarding us their address. Particular attention is requested to the liberal offers we make to all persons engaging in the sale of our Large Type Quarto PICTORIAL FAMILY BIBLE, with about One Thousand Engravings. On receipt of the established price, Six Dollars, the Pictorial Family Bible, with a well-bound Subscription Book, will be carefully boxed, and forwarded by express, at our risk and expense, to any central town or village in the United States, excepting those of California, Oregon, and Texas. Our books are sold by canvassers, and are well known to be the most saleable.

Address, post-paid ROBERT SEARS, Publisher,
No. 181 William-st., New-York.

Delightful Business for All!

FOR NEWS DEALERS,
CANVASSERS, MERCHANTS,
POSTMASTERS, CLERGYMEN,
FARMERS, PHYSICIANS,
STUDENTS, DRUGGISTS,
MALES, FEMALES,
FOR ALL!

The extraordinary demand for BEADLE'S DIME BOOKS, throughout the whole country, has led the publishers to make special arrangements for the supply of sections and districts not hitherto supplied by the ordinary channels of trade. The publishers, therefore, MAKE IT AN OBJECT for Postmasters, Tradesmen, and Canvassers, residing in the various small towns and post-offices of the interior, to enter into the agency for the DIME PUBLICATIONS, which comprise some of the most available and popular books ever introduced to the American people, whose success is beyond precedent in the history of the book business. Parties wishing to embark in a pleasant and profitable business, will send for a circular to the publishers, when all the necessary information will be given.

☞ Do not fail to send for a circular to

IRWIN P. BEADLE & CO.,
General Dime Book Publishers,
No. 141 William-st., New-York.

TO THE PUBLIC.

Do you wish to read an entertaining, instructive, religious and secular, family newspaper, sound, conservative and safe,

THE LARGEST IN THE WORLD,

giving a full, impartial and reliable summary of all the news in all religious denominations, from all political parties, from all countries in the world, belonging to no sect in the Church, and to no party in the State, but opposed to every *ism* that disturbs the peace of the community and the harmony of the country; a newspaper having distinct departments devoted to Agriculture, Commerce, and General Literature, with Tales, Poetry, Science, and Art, furnishing pleasant and instructive reading for children and parents, in all the realms of matter and mind? You can have it for one year by sending your name and address, with $2.50, to the NEW-YORK OBSERVER office.

COMMISSION TO AGENTS.

Any person who will obtain five *new subscribers* with advance payment, may retain FIVE DOLLARS as his commission, and for twenty *new subscribers*, may retain Twenty-five Dollars. SIDNEY E. MORSE, JR., & CO.,

EDITORS AND PROPRIETORS,
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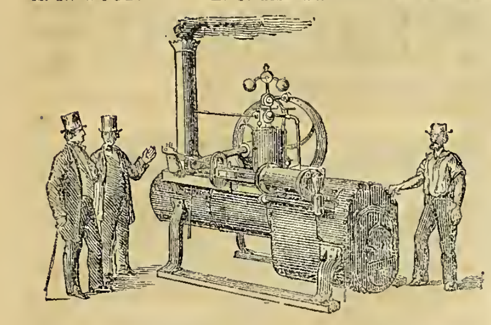

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Publisher's Notices.

(See Premium List and remarks, on page 348.)

The Time has Expired, for new subscribers to secure the *large* "baker's dozen," but no matter, we will print ten thousand extra copies or so, of this number to be given to those who first send in their Subscriptions for 1861. Those soliciting new subscribers can therefore still offer them the premium of two numbers of this year *free*. We can not, from present indications, promise that these extra copies will hold out for the whole of the month. All new names received during Nov. will certainly get the December number free, and the first ten thousand will also get the November Number.

☟

"Good for the Eyes," said our proof reader, as he looked at the clear, sharp impression from the **new type** used in most of the present number. We intended this new type for the New Year, but we have plenty of other improvements in store for the *twentieth* volume: Furthermore, first impressions go a great way, and as we wish to stand well in the *eyes*, as well as hearts, of the thousands of new readers now coming in, we have anticipated our own plans, and put on a new dress in the present number.

☟

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☟

Election Day will bring together many farmers, and others, who would subscribe for the *Agriculturist*, if it were shown to them. By taking along your copy as a sample, and voting early (but not "often"), you may spend the rest of the day profitably in making up a premium club. With a strong effort, you may, perhaps, secure a premium in a single day.

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☟

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Or, if the reader prefers, he may transpose it thus:

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☟

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☟

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☟

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AMERICAN AGRICULTURIST,

ADAPTED TO THE

Farm, Garden, and Household.

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ORANGE JUDD, A. M.,
EDITOR AND PROPRIETOR.

ESTABLISHED IN 1842.

$1.00 PER ANNUM, IN ADVANCE.
SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 12. NEW-YORK, DECEMBER, 1860. [NEW SERIES—No. 167.

☞ **Office at 41 Park-Row,** (Times Building.)
☞ **Contents, Terms, &c., on pages 376-77.**

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December.

"If now in beaded rows, drops deck the spray,
While Phœbus grants a momentary ray,
Let but a cloud's broad shadow intervene,
And stiffened into gems the drops are seen,
And down the furrowed oak's broad southern side
Streams of dissolving rime no longer glide.
Though night approaching, bids for rest prepare,
Still the flail echoes through the frosty air,
Nor stops till deepest shades of darkness come,
Sending at length the weary laborer home."
BLOOMFIELD'S FARMER'S BOY.

We have now reached the shortest days of the year, and every thing stands in striking contrast with the long bright days of June. We have bare, desolate branches, for the sea of living green; a robe of snow on every field, for the verdant turf; sheeted ice on every stream and lake, for the rippling waters; cloud and storm, for the sunny skies of Summer. Nature bids us pause and look back over the vanished months. It is a time to sum up the results of the year, not only to square business accounts with our fellow men, but to sit in judgment upon our own relations to the soil, and to society. One's manhood is measured quite as much by his farming, as by the offices he fills, by his plowing and sowing, by his building and adorning, as by his speech making and voting. We may measure ourselves quite as well by the plowshare as by the badge of official place. A Justice of the Peace may be greatly wanting in justice toward his soil. A deacon may be unrighteous toward his farm and stock. A militia colonel may be cowardly and inglorious upon his own acres. A governor may tolerate all sorts of insubordination and bad citizenship among the subjects of his farm. Weeds may grow rampant and waste the riches of his soil in riotous living. Goodness and greatness in our relations to society, do not imply these virtues in relation to the acres that are given us to be subdued, cultivated, and beautified.

We can not very well divert our minds from this theme now. The clod is frozen, and the plow will not turn it. All the implements of husbandry have gone into Winter quarters. The flocks, the trees, the shrubs, the grasses, are all hybernating. We can do little out of doors to advantage now, but we can do a large business within, in these brief days of Winter. The weather shuts us up to self communion and to reflection upon the events of the past. The Winter with icy finger seems to interrogate every tiller of the soil, what sort of farmer art thou? What sort of virtues does your business develop? A man's business has something to do with his character, but the principles on which he conducts it, have much more to do with it. You have reached another stage in life's journey, and have time to consider what your business and your mode of managing it, are doing for you.

Are you a *wise* man, tested by your business capacity? In the good old times when we were boys, they used to charge us with having eyes bigger than the stomach, and the heap of unused food upon the plate was an argument in favor of that position, rather hard to meet. There is not a little farming showing the same kind of wisdom. The tiller of the soil is apt to have very large eyes, supposing that he adds to his wealth as he adds to his acres. With only capital enough to work thirty acres, he buys three hundred, and his large farm keeps him a small, poor man as long as he lives. He sighs for more land, and looks to this as the remedy for his poverty. The most profitable acre that he cultivates, does not pay him ten dollars above the expenses of working it, while his neighbor of few acres, gets one, and sometimes two hundred dollars an acre net. Every year the large landed proprietor but small capitalist, comes out with little or nothing beyond working expenses, and this gives a sad coloring to his whole life. He succeeds in nothing that he attempts. Is this passion for more land, when we have not the means to use a little well, wise? Is the reader related to one of these large landholders and poor farmers? Now is a good time to vindicate your reputation for wisdom; to sell off your unused acres and to turn over a new leaf in husbandry.

Are you a *just* man? You received some twenty years ago, perhaps, a good farm. It was in good heart then, making fifty bushels of corn, thirty bushels of wheat, and two or three hundred of potatoes to the acre, without much manure. Possibly this farm has run down under your management, so that it does not produce half the quantity of products, or carry half the stock it did, when it first came into your possession. It has been over cropped and under manured, so that of necessity it has given out. You will say the farm was yours, and you have a right to do what you will with your own. But your horse is your own, yet you have no right to abuse him. Your house is your own, but you have no right to set fire to it. Cruelty to brutes, and arson are crimes recognized in the civil code. The soil, of course, has no sensibilities, but it may be abused nevertheless. It is combustible, and if you have reduced its productive capacity one half, you have as really burnt up your farm, as if you had touched it with a match. You have sold off hay, or consumed it upon your farm, without saving the manure of your stock. The hay, corn, and other vegetable products took large quantities of carbonaceous matter from the soil, and it has been dissipated in the atmosphere, through the lungs of the animals that consumed it. The process has been slow, but it has been really burnt up and scattered to the four winds through your agency.

The farm of twenty years ago belonged to the commonwealth, as well as to you. It was a part of the possessions of a state, held in trust for posterity. It received the protection of law, and you were under obligations for this protection of your interests, to hand down the soil not only unimpaired but improved, for the use of posterity. You have been made secure in the enjoyment of all the fruits of your industry, and you were bound as a good citizen to augment the resources of the State, and to make the soil better for your living on it. If we look a little beneath the surface, we shall find moral delinquency in bad husbandry. No man has a right to impair the commonwealth, and dissipate the inheritance of future generations. It is unjust.

Are you a *cultivated* man? This is of infinitely more importance than the cultivation of your acres. Are body, mind, and heart duly developed, so that all your friends know and esteem you as something more than a farmer? Does this self culture show itself in the adornment of your home? The farmer, of all men, has the best opportunity to cultivate his taste, and to make the most of himself as a man. He is daily in the school of the great Architect, and may have constant communion with the fairest forms, the brightest colors, and the sweetest sounds in Nature. The fading stars, the purpling dawn, and the rising sun, usher in his morning, and the gorgeous coloring of the evening with its ever new pictures of illumined cloud, are his for a perpetual possession. Spring comes with its bursting buds and opening flowers, and Summer with its garlands of roses, its meadows of perfumed grasses, and its forests of freshest verdure, to educate him in the love of the beautiful. Of all ornaments to a home, trees, shrubs, and flowers are, at once, the most accessible, and the most charming. Without them, the master piece of the architect in the country is incomplete. With them, tastefully arranged, the humblest cottage is redeemed from ugliness, and made a pleasing object in the landscape. Is your soul so far cultivated that it has found expression in the tree-planted avenue; in the lawn with its edging of forest, or belt of evergreens; in the trellis, loaded with roses; and in the flower border, peopled in its season, with a throng more gorgeous than the attendants of princes? These are marks of the cultivated farmer.

Calendar of Operations for Dec., 1860.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 33° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the North, and later for the South.

☞This department is much fuller in the working season, embracing all the operations of the farm, garden, etc.

EXPLANATIONS.—*f* indicates the *first; m*, the *middle;* and *l*, the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

The main work of the month will be manufacturing, rather than cultivating. The stores of hay and grain are to be worked over into beef, mutton, pork and manure. Practical skill is needed in these operations as much as in plowing, planting and harvesting. The best modes should be studied and the most approved apparatus provided.

It is well at the close of the year to balance all books of account with the farm and with individuals; to "square up" all bills as far as may be, but at any rate, to know precisely how matters stand.

Cattle now depend wholly upon the care of their owners. Keep them thrifty, by warm stables, abundant and varied food, plenty of bedding, and free access to water. Allow them to spend pleasant weather in the yards, except at feeding time.

Cellars—Continue to guard against frost; sort over apples or roots that may be decaying.

Cranberry Plots—Keep flooded, if practicable.

Fencing—Collect timber; prepare rails and posts.

Fodder Racks—Provide them in all the yards where cattle or sheep are fed. The saving of hay will more than pay the expense.

Hogs—Kill as early as possible. They will gain but little during severe weather.

Horses—Read and follow directions of last month.

Ice Houses—Fill with the first ice that is available—it is usually better than the second crop.

Lumber, Timber, etc.—Draw from the forest to the mill, while snow is upon the ground.

Manures—Make and save all possible. Provide muck or other absorbents for liquids. Compost solid excrements with muck, leaves, and straw.

Meadows—Top dressings of fine compost may be applied at this season when the weather allows.

Marketing Produce—Take advantage of the first paying offer for grain, etc., and remove from the granaries as early as practicable.

Poultry—Read article on Eggs on page 359.

Sheep—Give them shelter from storms. Provide feeding racks, in yards or sheds apart from other stock. Give roots cut fine with their hay. Salt regularly, and let them have free access to water. Select and turn in the best buck that can be had.

Stacks—Draw hay or straw to the *barn* to be fed.

Tools—Improve stormy weather by repairing such as need it, and making new ones if wanted.

Turnips and other roots—Examine those stored in pits or cellars and keep well ventilated and protect against frost.

Water Pipes, etc.—Cover with manure or straw, when protection from frost is needed. Remove ice about troughs, to prevent accidents to stock.

Winter Grain—Keep all stock from the fields. See that the drains remove all standing water.

Wood—Secure a full supply for the coming year. Cut and pile to draw when snow falls.

Orchard and Nursery.

There is little to be done in this department if the labors of the previous month were properly attended to. At the South, planting may be continued while the weather permits; it is not advisable to attempt it where the ground is frozen. Composted manure may be applied about the trees; it should be spread as far as the roots extend, and not placed directly about the trunks.

Much work preparatory for Spring may be done in the nursery. Labels and stakes can be provided, registers of plantings made out, accounts settled, and new plans arranged.

Cions—Cut at any time when not frozen, and bury in dry earth out of doors, or in sand in the cellar. Let each sort be properly labeled.

Pruning is better done now than in Spring, but where practicable, leave it until next July or August. Stake up young trees that are swayed down by winds, using matting or straw to prevent injury of the bark.

Trench or subsoil and underdrain lands for future plantings. Soil so prepared, can be worked much earlier in the season.

Vermin—Strips of cloth or strong paper tied about the trunks of trees, and covered with tar, will repel mice and rabbits. Do not apply tar directly upon the bark; many trees have been destroyed in this manner.

Kitchen and Fruit Garden.

Something may be done here to forward next Spring's operations. Draining, trenching, and subsoiling which can be performed where the ground is unfrozen, will prepare the soil to be worked one or two weeks earlier the following season. Bulbs, blackberries, currants, etc., can be planted until frost prevents.

Asparagus—Cover all unprotected beds with a good coating of manure—that from the horse stable is preferable.

Bean and Hop Poles, Raspberry stakes and Pea brush may be collected from the frozen swamps and stored ready for the busy season of planting.

Cabbages, Cauliflowers and Celery—Secure any yet remaining in the open ground, *ff*. Examine those already stored, and attend to if decaying.

Cold Frames—Guard carefully against sudden cold. Give extra covering of mats or straw as the weather becomes more severe. Ventilate as often as the temperature without will allow. When steady cold weather comes on, cover with boards in addition to the mats, to shed the rain and melting snows. Snow falling on them may remain.

Cuttings—Take from Currants, Gooseberries, Grapes and Quinces when not frozen, and keep in dry earth out of doors or in the cellar. Label each kind plainly.

Grape Vines—Prune, *ff*, if not done in November, which is preferable. Remove from the trellises, and cover with an inch of earth, or with straw and boards. Even the hardy kinds will thrive better for this treatment.

Manure—Secure an abundant supply from every available source, for future wants. Collect and prepare materials for early hot-beds.

Plans for the garden should be in readiness before Spring work presses. Lay off the whole grounds on paper, and designate the location for each article, during the present leisure.

Raspberry Canes—Protect, *ff*, all tender sorts not covered last month.

Spinach—Cover with thin layer of straw or leaves.

Turnips and other roots in pits should be examined to keep ventilation good, and exclude rain.

Vegetables and Roots for seed—Secure a good stock of the finest for Spring planting.

Flower Garden and Lawn.

Although flowers are faded, and leaves are scattered, the lawn need not be desolate at this season. Evergreens properly disposed, give an attractiveness rivaling the Summer bloom. Where snows fall, these will need some care to prevent splitting of the branches. Pass a cord around the spreading branches of Junipers, Arbor Vitæs, etc., and draw them together, that less surface may be exposed.

If the weather continue open, grading, terracing, and leveling new grounds, laying out walks, avenues, etc., may be done. This is the appropriate season for making plans of proposed lawns and pleasure grounds; it will be a pleasant exercise of taste for the different members of the household. If a satisfactory plan can not be originated in this way, it will be well to consult a professional landscape gardener. In any case, the suggestions of such a person will be valuable.

Bulbs—If any of these are still out of ground, plant them, *ff*, as per directions of last month.

Chrysanthemums—Divide roots and reset as long as the ground remains open.

Frames and Flower Pits—Keep closed, and covered with straw, mats, etc., during cold and inclement weather. They need not be opened during the month unless a succession of fine days occur.

Roses, and other flowering shrubs, Ornamental trees, etc., may still be set out as long as the ground remains open. It is better to set them now, than to wait until Spring.

Green and Hot-Houses.

These will need careful watching during the changeable weather of December. A warm sunny day, in which the ventilators are safely kept open for hours, may be followed by a sharp freezing night, when the double sash should be closed, or the outer shutters put on. Growing plants require as even a temperature as may be, and there is the opposite danger of too great heat, if the fire be left unwatched. Avoid extremes: regulate the heat by a thermometer, in accordance with the wants of the various collections. In the Greenhouse proper, 40° to 50° will be sufficient, while 75° to 85° will be none too much for others, and some hot-house plants will thrive best in an atmosphere of near 100°.

Another thing requiring especial care at this season is to guard against fire, which often originates from defective flues. A hydropult, hand engine, or portable pump should always be at hand to throw water from the cistern at a moment's warning.

In the Hot-House proper, most of the plants are beginning to grow vigorously, and many of them are forming flower buds. They therefore require more water, and fresh supplies of pure air, each day if practicable. Do not open both upper and lower ventilators which would create a cold draft. Opening the upper ones a few inches will be sufficient. Close early, and if the night promises to be sharp or snowy, cover the glass with wooden shutters.

Let everything be kept clean and neat. Remove all decaying leaves, moss, weeds, etc., and stir the surface soil of the pots occasionally, giving liquid manure to those plants which are lagging.

Some of the early forced bulbs are beginning to bloom, and others may be brought in from cooler apartments to prepare them for a succession of flowers. Change the water in hyacinth glasses once a week, at least.

Insects should be kept in check by thoroughly smoking with tobacco. Syringe the walls occasionally to dislodge millers secreted there.

Water rapid growing plants frequently; see that the drainage is perfect. Keep a tank of water in the house that it may always be of the proper temperature. Its evaporation will also tend to preserve a humid atmosphere.

Apiary in December.

BY M. QUINBY.

Many who keep but few bees, and can not afford the expense of a special room or cellar for winter quarters, would like to know the safest way of wintering them with the least trouble. A *first-rate* stock may be wintered with very little care in almost any situation, but those of second and third rates require some special attention. When left in the open air, the moisture which arises from the bees, forms ice within the hive. The accumulation of this will make the bees very uncomfortable while it is frozen, and still more so when melting. If the holes in the top of the hive are opened for this moisture to pass out, so much of the animal heat will go with it, that the bees are uncomfortably cold. If they do not freeze they must consume much more food to keep up a temperature that will sustain life. With proper heat, the liquid portion of their food, probably passes off in the form of vapor, leaving the more solid part as fæces, which can be retained till occasion offers for flying out and voiding them. But when the colony is kept a long time in a cold, chilly state, the warmth of the bees is insufficient to sweat out, or drive off even the liquid portion, which accumulates in the form of fæces so rapidly that the bees can not retain it; they leave the cluster in the hive during severe weather, to void it, very often besmearing each other, the combs, and the inside of the hive, with this offensive matter. The frost and ice on the combs and inside of the hive, will frequently melt in the middle of the day and freeze at night, closing the air passages, and smothering the bees.

For those who let their bees stand in the open air, I recommend that the summer and winter stand be the same. Let it be sheltered from prevailing winds, and where the sun will strike the hives each day a short time. The sides, back and top, and sometimes the front may be protected with straw. Ventilate by raising the hive one-fourth of an inch. Cover with wire cloth all holes large enough to admit mice, leaving a space just large enough for a bee to pass. Open the holes in the top, and set over them an empty cap to receive the moisture.

For wintering small colonies that would fail in the open air, the following method has proved successful the past two seasons. Place two scantlings, three or four inches square, on the ground, parallel, about twelve inches apart, in a place where no water will stand. The open bottom of the hive is then set over the space between the joists. The holes in the top of the hive are opened, and an empty cover set over, as in the other case. At each end, in the center, an upright post is set in the ground, just high enough to support a scantling passing along over the top of the hives. Boards are cut long enough to come together over the top of this joist when their other ends rest on the ground, to form the roof. Commence at one end, as you proceed in making the roof, and fill all spaces about the hives with straw or hay, except immediately under them. A small opening for the admission of air, is made at each end, in such a way as to exclude all the light. These are covered with wire cloth, to keep out the mice. One opening will be sufficient, when less than ten hives are put in. Except the ventilators, the whole is covered with a good coating of earth. The combs seldom mold when wintered in this way, especially when the holes are properly distributed in the top of the hive. For a small number of hives, this is probably as little trouble as any safe method for second class stocks; those who have tried it have generally been successful.

For large Apiaries—from 50 to 100 stocks—the dry cellar or dark room, is, in many respects, preferable. The bees that are to be wintered in this way, should remain on the stand and have an opportunity of flying as long as there is a probability of the weather being mild enough to admit it. Choose a cold day to remove them to the house. With the common hive, a more thorough ventilation is secured by opening the holes in the top, and inverting the hive on little blocks of wood. The air in passing through the hive, carries with it the moisture that otherwise might mold the combs. A few dead bees may fall into the top of the hive, but as they readily drop out again on its being set upright, the evil is less than to have moldy combs. The movable comb hive is fully ventilated, right side up, by simply opening the holes in the honey board, or removing it. The hives, as they are brought in, may be arranged on shelves, a few inches apart, that the bees shall not creep together. Any light stock that may need feeding before Spring, should be so located, that it may be examined and fed without disturbing the others. If such a room could be enclosed with double walls, making a dead air space, the temperature would be much more uniform, and would keep the bees more quiet through the Winter. A very little air should be admitted into the room, and a place made overhead for its exit; both constructed so as to exclude light. Let each hive and its stand, be marked or numbered, so that each may be returned to the same place in the Spring.

Our Exhibition Tables.

The show during the month has been unusually attractive, and the number of visitors undiminished. Want of space compels the omission of many notes taken on various articles, to which reference may be made hereafter. The following are among the specimens exhibited, and not noticed before.

Trees, etc.—35 varieties of Evergreens, including many new sorts, from Parsons & Co., Flushing, N. Y......Cranberry plants, in bearing, very fine, J. & W. R. Dill, N. J.

Vegetables.—Kohl Rabi, J. Kettel, Kings Co., N. Y......Vegetable Eggs, J. M. Cornell, Westchester Co., N. Y......Kohl Rabi and White Turnips, C. F. Gunther, Westchester Co., N. Y...... Prince Albert Potatoes, very fine, O. S. Cummings, Mercer Co., N. J......Ears of Corn, Edgar Jones, Chautauque Co., N. Y......Squashes, Pine-Apple and Honolulu, large and fine; the former went from the exhibition table to the *dinner* table, and was pronounced *A*, *No.* 1, S. B. Conover, Washington Market, N. Y......Yellow Stone Turnips, very handsome, Mr. Ridgeway, Staten Island......Mangel Wurzel Beet and Black Radish, large, Jas. Chase, Kings Co., N. Y......Seedling Potatoes, named Bulkley and Stone Hill, D. A. Bulkley, Berkshire Co., Mass......Eight rowed Corn, planted May 19th, gathered Sept. 26th, W. Leland, Metropolitan Hotel......Corn, splendid specimens, Geo. R. Underhill, Suffolk Co., L. I......Purple Top Swede Turnips, large, J. M. Hubbard, Essex Co., N. Y.... Radishes, Mr. Anderson, Brooklyn, N. Y......Mammoth Pumpkin, weight 125 pounds, Rich'd Gould, Hudson Co., N. J.....Tomatoes, fresh from the vines, in fine condition, Nov. 10, W. F. Heins, N.Y.

Fruits.—Pear, Duchess D'Angouleme, weighing 1 lb. 7½ oz., T. Woods, Westchester Co., N. Y..... Apples, Vandervere and (apparently) Russet, growing on same stem, J. D. Russell, Westchester Co., N. Y.....Newtown Pippins, good, S. A. Van Wyck, Suffolk Co., L. I......Fall Pippins, fine, G. A. Eckers, Westchester Co., N. Y......Quinces, extra, Geo. Hudson, Kings Co., N. Y.....Lady Apples, G. Musher, Richmond Co., N. Y....Latham Apples, E. Latham, Suffolk Co., N. Y......Blood Apples, quite curious, the flesh dark red throughout, Mr. Woodworth, N. Y......Sweet Chestnuts, fine specimens, Mr. Lamoureux, Somerset Co., N. J.

Flowers.—Seedling Dahlias, raised this year, very good, Mr. Labaugh, N. Y.....Dahlias, a splendid collection from the N. Y. Orphan Asylum, C. S. Pell, Supt.—the roots are for sale for the benefit of the Institution—also by the same, Chrysanthemums, the finest we have seen this season....... Dahlias and cut flowers, A. P. Cummings, Esq., Westchester Co., N. Y.....Passion Flower, splendid varieties, by the same......Dahlias, beautiful assortment, H. F. Krause, N. Y......Chrysanthemums, choice sorts, W. F. Heins......Chrysanthemums and Dahlias, fine, Mrs. W. T. Hemmenway, Queens Co., L. I.....Chrysanthemums, Mr. Stratton, N. Y., R. Cunnington, Kings Co., N. Y., and T. F. Stewart, Queens Co., N. Y.

W E L C O M E

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Washington.

Compliment to a Royal English Farmer.

One of the most pleasing and auspicious events of the present year, was the recent visit to this country by the Prince of Wales, the eldest son of Queen Victoria, and heir to the throne of England. If the inhabitants of our several States could mingle together more, they would understand and appreciate each other better, and there would be far less of jealousy, distrust, and hatred. So with the people of different nations. The visit of the heir apparent to the throne of England, to study our country and its institutions, and the kindly manner in which he was received, can not fail to bind the two nations more strongly together. But we can not enlarge on this point, our main object being to refer to an item connected with the public reception of the Prince of Wales. His father, Prince Albert, the Royal Consort or husband of Queen Victoria, has long held a high place in the regard of the farmers of England, from his active interest in all matters pertaining to the culture of the soil. He has been, and is, one of the most efficient members of the Royal Agricultural Society, which is probably doing more for the improvement of agriculture generally, than any other association in the world. He has not merely given the society his influence, but has participated in its meetings as a working member, and been a prominent exhibitor. The animals from his own well-cultivated farm have frequently borne off the highest premium offered for improved stock. With the understanding of these facts, and having noticed that in all the public receptions in this country, slight reference had been made to the *Father* of the Prince, we thought it appropriate to suspend the banner copied above, across the street, at the time the procession escorting the Prince, passed in front of the Office of the *American Agriculturist.*

The Banner was of large size, painted in colors, and attracted considerable attention, as our readers may have observed by the notices in the New-York papers generally.

A Lawsuit—Somebody after $10,000 Damages from the American Agriculturist.

We have been favored by some unknown parties with a lengthy document, filled with legal repetition and verbiage, which is rather complimentary in its character, as it sets a value of $10,000 upon four or five lines that appeared among our basket items last Spring. (*Query.*—If four or five lines are valued at $10,000, what is the value of only a single number of the *Agriculturist* containing upward of 5000 lines ?)

The 'head and front of our offending' appears to be, that, in response to the queries of some of our subscribers, we remarked : "*it is all nonsense to talk of large tracts of good land near New-York, Philadelphia, etc., as having remained overlooked until this day....The good qualities of a majority of the magnificent farming lands advertised there, and at other points at the East, are on paper.*" These lines were aimed at no one in particular—certainly not at the parties who now appear as "plaintiffs," for we never heard of them until we saw their names in the document before us—but they were designed as a caution to our readers generally, against being too credulous in regard to certain tracts of land in New-Jersey, that have been advertised the country over, and some large tracts of land lying in various parts of Long-Island. It is claimed that the original offence was hightened by the lengthy article in the May *Agriculturist*, in which we endeavored to set forth the geological formation and agricultural value, as well as deficiencies of the lands of Long Island generally. We claimed, and yet claim to know something of these lands. We also claim to be wholly unprejudiced, either against any L. I. lands or their proprietors. Of the latter we know nothing personally ; in the lands themselves we have a deep interest as a permanent citizen of Long Island, and heartily wish we could honestly endeavor to promote the sale of *every* acre to industrious cultivators from elsewhere. In response to the courteous request of Messrs. Morris, Peck, and others, that we would again go over these lands for an extended and minute survey, we had purposed to do so, at the earliest possible moment our business would admit of the required absence. But the course of the parties to this suit will necessarily compel us to make such an investigation as shall justify what we have written.*

We will now only say, that if the parties to this suit have commenced it with a view of intimidating us from honestly speaking what we believe to be the truth on all matters of interest to the public, regardless of consequences, they have mistaken their man. If they candidly think they have just cause for complaint in what we have hitherto written, and prefer to call in the aid of the law instead of resorting to more peaceable means, we can not, of course, refuse to meet them. If they are aiming at a covert advertisement, by attempting to call public attention to themselves, we shall not aid them in the columns of this journal. If they desire only a candid examination of the claims of their lands to public attention, let them take fair and honorable means to secure it—their present course will not expedite their object. If they hope to extort from us by legal force, what they may have failed to get from their lands, they will have to wait a while at least. Ten thousand dollars will pay for a 'considerable' tract of some of the lands of Long Island, even at the price they cost the present proprietors, and *if* after a thorough, full investigation of the subject, a jury shall, in due time, decide that our four or five lines, more or less, are of as much value as 2000 acres of Long Island land, and the court of last resort shall confirm the decree, why we shall cheerfully "fork over." But of that there can be no probability even, and if there were, the kind appreciation of our past course by our readers, and the efforts now so generally being put forth by them all over the country to increase our subscription list, would doubtless supply the means, *when* needed.

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* An interesting chapter may yet be given concerning the two days' labor with us recently, by a man who has figured as a writer in the agricultural papers—giving his importunities, and his *threats* if we did not write more favorable notes on these lands, or else keep silent. He probably said more concerning himself and other parties than he intended. But "thereby hangs a tale."

Plans for a House—$200 Premium offered for Elevation Plans to Correspond.

We have on hand a considerable number of plans for Houses, Barns, and other buildings, to be used as we have room. All such plans are *suggestive*, and are therefore interesting, not only to those who have permanent structures already erected, and to those about to build, but also to those who hope to build—and who does not? We present in this number a ground plan, and a chamber plan, for a Dwelling, designed by Hon. Wm. D. Bishop, of Bridgeport, Ct., formerly Commissioner of Patents. He is desirous of obtaining the best Elevation, or outside plans, for a house to contain essentially the arrangement of rooms, etc., shown in the annexed plans, and authorizes us to offer for him, a premium of $200 for the best plan that may be proposed. The plans offered for competition, are to be sent to his address, on or before Jan. 20, 1861. They will be submitted to a Committee of experienced builders, and the premium paid to the person whose plan shall be pronounced best by them. [We cheerfully publish this proposition in consideration of being furnished with the plan adopted, for publication in the *Agriculturist.*] All persons competing, are invited to offer any suggestions as to slight alterations in the floor plans, provided that the size of the rooms be not reduced, that the general arrangement be not interfered with, and the cost be not increased.

Location, Material, Cost, and Architecture.—The location is to be about in the center of a 7-acre plot, nearly level, laid out with lawn in front and on the sides, and kitchen-garden, carriage-house, and out-buildings in the rear. A public street runs along the south-east side of the plot, and another along the north-east side. The main front of the house is to face the south-east. The structure is to be of wood; the first floor 20 to 24 inches above the general level of the ground. The roof to be steep enough for shingles or slate. Total cost not to exceed $10,000. The style of architecture will be left to the Architect—provided it be not Gothic or Grecian.

Sundry Notes on the Plans.—The general arrangement and size of the rooms, are sufficiently indicated in the diagrams and descriptive notes. The main rooms of the first floor are to be 11½ feet high in the clear. The second story 9 feet in the clear. The Chamber Plan (fig. 2,) shows what part of the structure is to be two stories in hight. Attic room sufficient for servants, and for storage, will be required. The space to the right of *O*, and to the left of *P*, on the ground plan, (fig. 1.) shows the part extending under continuation of Piazza Roof.

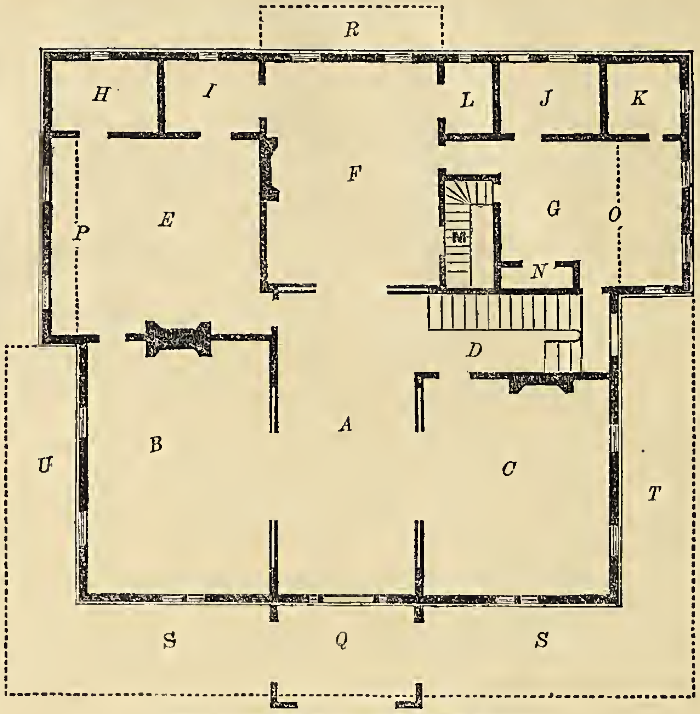


Fig. 1—GROUND PLAN—FIRST STORY.

A, Main Hall, 12x26½ feet—*B*, Parlor, 16x22—*C*, Library, 16x19- *D*, Hall, 7 ft. wide, in which is the main Stairway to second story, A Stairway also leads from the hall, under the main stair, to the basement. This is also accessible from the kitchen, *G*.—*E*, Family Bed-room, 18x17⅓, which is connected with *H*, a Dressing-room, 6.10x9½ and *I*, a Bath-room, 6.10x8—*F*, Dining-room, 15x20—*G*, Kitchen, 13x17¼—*K*, Pantry, 6.10x7¼—*J*, Wash-room, 6.10x9½—*L*, China Closet, 6.10x4½—*M*, Rear Stairs to Chamber, with Store-room underneath them—*N*, Closet for Crockery—*Q*, Front Porch, 8x12—*R*, Rear Porch, 4x15—*S*,*S*, Front Piazza, 8 feet wide—*T*, Side Piazza, 7 feet wide—*U*, Side Piazza, if desirable.

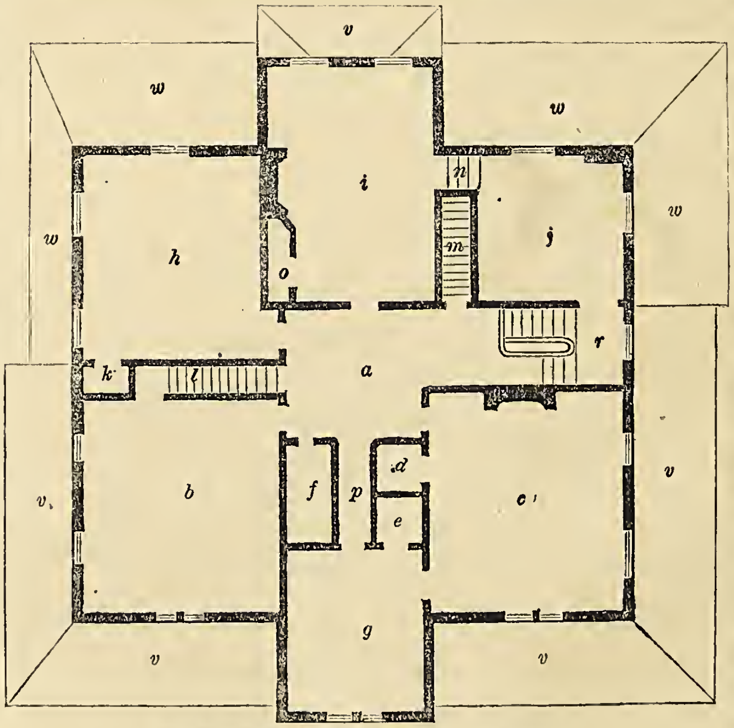


Fig. 2—SECOND STORY, OR CHAMBER PLAN.

a, Central Hall, same width as lower Hall—*b*, Bed-room, 19x16⅓—*c*, Bed-room, 19x16⅓—*g*, Bed-room, 12x14—*h*, Bed-room, 15x17¾—*i*, Nursery, 15x20—*j*, Play-room, 12x12⅔—*l*, Attic Stairs, with closet under opening into *b*—*k*, Closet from *h*—*f*, Linen Closet, 4x8½—*p*, Hall 3½ feet wide—*e*, Closet from *g*—*d*, Closet from *c*—*r*, Main Stairs Platform—*m*, Stairway down to kitchen—*n*, Steps from play-room to nursery—*o*, Closet from nursery—*w*, *w*, *w*, *w*, Wing Roofs—*v*, *v*, *v*, *v*, *v*, Piazza Roofs.

The bed-room, *g*, extends in part over the front porch. The floor of the Play-room, *j*, is to be on a level with the platform of the main stairs. This reduces the hight of the kitchen; it is done to give a higher play-room, and allow the windows to be above the reach of small children, without deforming the outside architecture. Steps lead from the play-room to the nursery. The Piazza, *U*, on the left, may be added or omitted, as shall best comport with the general architecture. Sliding doors are to separate the main hall, *A*, from the parlor, *B*, library, *C*, and from the dining-room *E*.

Remarks.—There are several good features in these floor plans, and some objectionable ones, which it may be easier to point out than to indicate a remedy for. The sliding-doors opening each way from the main hall, *A*, fig. 1, are convenient for throwing the whole suite of rooms together, but the heavy sliding-doors will be too cumbrous for constant use, especially at the principal entrance to the dining-room. There is no common room where the family may sit together, unless the Library, *C*, is designed for this purpose. The only bath-room provided, is not convenient of access to members of the family or visitors occupying the chambers. This is the most difficult room to be arranged for general use, without placing it on the second floor, which is objectionable, owing to the freezing and leakage of water pipes. We suggest to the competing architects to try to remedy the bath-room arrangement. Perhaps a stairway starting from the bath-room, would help the matter, and at the same time bring the family bed-room nearer to the nursery, which would seem to be desirable. We are decidedly in favor of an abundance of *closets* on the first floor of every house—they save much running up stairs. If building a house similar to this, we would work in at least four more closets, one of which should be a capacious one opening into the family bed-room. The dressing-room, *H*, may in part supply this. The provision for a high play-room is a capital one, and should be in every house where there are children.

Sundry Humbugs.

We have received abundant evidence that our caution last month was both timely and useful—particularly that part of it referring to "gilded articles." We have not kept account of the number of circulars, forwarded to us by those to whom they have been sent. As an example of our correspondence, we quote the following from Indiana: "......Enclosed please find two dollars for myself and a brother-in-law in Iowa. This money your article on humbugs in the November *Agriculturist* saved me. I was just about to send it with four dollars more in response to a "private" circular. I was to receive a lot of things in return, including a magnificent gold pencil case and pen, and in addition I was to be appointed an *exclusive agent* in this region for a very paying, honorable business, requiring no outlay....You will laugh at my greenness—and you are at liberty to do so, if you will withhold my name—but really the private circular looked all so fair, and the names of the parties sounded so much like those of well known responsible men, that it did not occur to me that the thing was not all 'on the square.' However, I feel less mortified about it, for I learn that several of my neighbors whom I have always considered to be more intelligent and more wary than myself, received similar circulars, and at least three of them forwarded the money and *of course* they each get the valuable 'agency' which was to be *exclusively* my own in all this region. One of them got a splendid *looking* 'gold' pencil and was exceedingly pleased, but his brother, a jeweler, 'took the starch out of him' completely, by showing how easy it was to rub the thin film of gold off from the outside of his splendid pencil. After a little rubbing, aqua fortis [nitric acid,] eat into it as readily as into any other brass....Excuse this long yarn, but I wish to show what a good work the *Agriculturist* is doing in guarding its readers against Humbugs. The fact is, as you say, country people are not suspicious. They are accustomed to trust each other, and when an apparently fair, plain, straightforward story is told them, even by those they do not personally know, they are apt to believe it. Keep on in the way you have begun. If the *Agriculturist* should do no more for the next year than to properly warn its country readers against humbugs, it will do the country far more good than all it will cost....I will just add, that three of my neighbors who carry gold pencils, are sure to be your subscribers next year. They have good reason to regret, as they do, that they did not heed my advice, and take it this year—it would have been money in their pockets in more ways than one."

"Beware of Mock Auctions."

This caution was quite common in the newspapers of a dozen years ago. Latterly we hear little on the subject. But our daily observation gives abundant evidence that the caution is just as necessary now as at any previous period. We could show the reader at least a dozen of the "red flags" in a walk of as many minutes, and there are probably twenty or more "Peter Funk" establishments within a mile from where we now write. Each of these supports from five to a dozen men, including the "auctioneer," clerks, and "stool pigeons." They pay enormous rents, which are required by the owners of the buildings in return for the risk of property and character involved. The net receipts at each of these establishments must average thirty or forty dollars a day to meet expenses, and enough more to afford a profit sufficient to induce the keepers to continue them. That they do receive this amount is certain, or they would not be kept up, and multiply in number. *Their profits come almost wholly from visitors from the country.* How often will it be necessary to caution every one coming to this city to avoid the "red flag" as he would a nest of pickpockets? To such perfection have this class of swindlers carried their arts, that it is not safe for an inexperienced man to look into one of the dens, even from motives of curiosity. Very recently an editor of a smart Yankee paper came here, who had "read the papers," and had published sundry cautions against mock auctions. He started out to see the "sights," and among others, visited one of these dens, just to see how the thing was done. He came out minus a good many dollars, but refused to let us help him get it back, lest the fact should in some way get before the public in connection with his name. Perhaps it may be well for us to give some of the modes of operations at these establishments, when we have more space. On the whole we think it will. Our humorous artist has given his "ideas" on the subject. The picture will bear studying in detail.

Book and Engraving Swindle.

We have the particulars of several cases where persons have forwarded various sums of money for books, engravings, etc., to parties in this city, for which they can get no satisfaction, either in return of goods or money, nor so much as a response to their letters of inquiry. In every one of these instances, so far as investigated, there is evidently a fraud. To some of these inquirers we have written; to others a marked copy of our caution last month has been forwarded as a sufficient reply. We have sundry investigations in progress, which render it desirable to withhold names for the present. We will now merely state, that our *subscribers* will consult prudence by addressing a note of inquiry to this office, before sending money to any unknown parties in this city—enclosing a Post-Office stamp where a reply is needed. When no reply is received from us, the parties may conclude that their money is safest in their own pockets. This is undertaking a business which will involve no little labor, and which we would gladly avoid, did it not seem to be absolutely necessary. The only remuneration we shall expect is, that when this trouble on our part saves money to our readers, they will reciprocate the favor by an effective word in behalf of the *Agriculturist* in their several neighborhoods.

One of the Quacks.

Judging from the number and description of quack medicine advertisements that crowd the columns of American newspapers, one would think this the paradise of swindlers and fools; but the following from a Prussian paper, exceeds all the performances we have met with, in the humbugging line. A quack in Prussia, has published a tract entitled "Cider, Milk, and Water the Only and Best Medicinal Agents." Here is an extract showing the general style. "The magneto-physical stream of this mighty fulness of the gifts of nature penetrates marrow and bone only for their weal, alarms what is unnatural, excretes unhealthy humors, together with old deposits of medicinal substances, whereby the natural vigor regains its life and helps itself." !!!

* * *

The man who went "a fishing" with the "North Pole" took "Mason and Dixon's Line." Finding the pole too long, he cut it off with one of the "Earth's Axes."

Green Fodder versus Dry.

A correspondent wishes to know if there is any difference between the nutritive qualities of green fodder and dry. It is the common opinion, we believe, that, in drying, hay loses some of its valuable qualities. Certainly, its effects on the digestive system are quite different. M. Boussingault once read a paper before the French Academy of Sciences, in which he stated that a heifer was fed alternately, for ten days at a time, upon green and then dry food, and the animal was weighed at the end of each ten days. No perceptible difference appeared in the average weight. He therefore came to the conclusion that there was as much actual food in dry fodder as in green, provided both were of the same sort of vegetable.

It is probable, however, that in the drying process, some of the starch, gum, and other nutritious matters in herbage, are changed to woody fiber, which does not afford nutriment, and that in the case quoted above, the animals consumed enough more dry than green fodder to make up for the difference in quality. Perhaps some of our readers have some reliable facts that will show how much, if any, loss is experienced by the drying process.

For the American Agriculturist.

How to Save Ammonia.

The best part of all the manures in our barnyard is ammonia, and this evaporates if we do nothing to save it. It goes off in the shape of a volatile gas, very pungent to the smell. Hence the strong odor about stalls, barnyards, sink drains, and privies. How to catch this fugitive and make him do justice to our gardens and fields, is the question. It can not be done if we keep our cattle at the stack-yard all Winter. There is a dead loss of five dollars on every animal so kept. But if the cattle are stabled or kept under open sheds, most of the manure may be easily saved. A bedding of dry muck two or three feet thick will absorb an enormous quantity of liquid manure, and will not need to be removed more than once before Spring. The solid manure should be removed every day and covered with muck or old litter.

In the stables, if they are cleaned every day, it is a good plan to sprinkle on plaster of Paris every day, about a pint to each stall. If this is not at hand, dry muck made very fine will answer a good purpose. The foulest stable floor will lose its pungent odor in a few minutes, if it be covered with fine muck or pulverized peat. The finer and dryer this earth is made, the greater its absorbing power. If it has lain over one season it is readily prepared for this purpose by a shovel.

Dried clay is also an excellent article for this use. If it is partially burnt, it is still better. For this purpose make a heap of dried sods, or brush, or any combustible material, and cover it with lumps of clay or clayey soil, leaving holes enough for ventilation. This mass when it is reduced by burning, makes a powerful absorbent, and is much less expensive than plaster. If it is not burnt, the lumps should be knocked fine with a hammer or mallet.

Every place about the house and barns, where there is the smell of ammonia, should have these coarse or fine absorbents. Many farmers lose one, two, and three hundred dollars a year for want of them, according to the number of animals they keep. The money goes streaming off into the air as palpably as if a whirlwind took up a pile of bank bills. The nose takes cognizance of it, but because farmers are not accustomed to reckon money by their olfactories, they do not perceive their loss. The loss nevertheless is as real as if their pockets had been picked. Wise farmers save their ammonia.

FARMER.

Tim Bunker on bad Water.

A STIR IN HOOKERTOWN.

"What upon airth do you 'spose is the matter with my well?" said Uncle Jotham Sparrowgrass, one morning in August. "We hain't been able to drink it for more than a month."

"Guess there's a cat in it," responded Benjamin Franklin Jones, who is always at leisure to attend to any business of his neighbors. "I found one in mine, last week. Shouldn't have found it out if I hadn't seen some of the hair in the bucket. Smelt like pizen though, depend on't."

"No there ain't any cat or rat in it. The water is as clear as a crystal, and I had it cleared out last week, but it didn't help it a bit."

"Shouldn't wonder ef it had been pizened," suggested Seth Twiggs, with a sly twinkle in his eye, and a puff of smoke that made the kitchen blue. He loves to play upon the fears of Uncle Jotham, and knows his weak spot. "Kier Frink was round all last month you know."

"You don't say that creetur is at hum agin! I thought we'd got rid of him when he married the widder," responded Jotham, with a faint feeling at the stomach.

"Ye needn't lay it to Kier," said Jake Frink, "for my well has been out of fix all Summer, and the boy wouldn't pizen our well. I know 'taint any thing uncommon to have the water taste bad in Summer at our house. Water gets low, smells a leetle like the bottom of a ditch, and I spose it's for the same reason. It draws the smell out of the dirt."

"Our well used to taste bad in Summer until I put them tile into the garden, and made the surface water run off through them into the brook," remarked Twiggs.

"Ye don't spose the bad smells come from the top of the ground do ye?" asked Jake.

"That's a new idee," said Uncle Jotham, "but there must be something in it, for my sink drain ain't more than ten feet from the mouth of my well."

This talk of my neighbors gives a clue to an evil that prevails in other communities besides Hookertown. It has prevailed here more than usual this Summer, because the forepart of the Summer was dry, and the springs and wells got low. You have pure water down in your city, for it is brought to you in iron pipes, that guard it against all the foul dirt and smells through which it has to pass. But out here in the country, where we brag about having every thing sweet and clean, we are often troubled with bad water, especially in the Summer time. A good many of my neighbors have had to apologize a little for their water, though some of them got so used to it, that they didn't know but 'twas the natural taste of all water. Somehow, there was a good deal that needed an apology that didn't get it. Even Dea. Smith, who is pretty particular about most things, had a well this Summer, that gave out an "ancient and fish like smell." Folks that are afflicted in this way, all wonder what's the matter with the water, when the matter is about as plain as the sun in the heavens.

I suppose nobody thinks the water gets bad without some cause, and yet they talk just as if they believed so. Seth Twiggs has the right of it, this bad taste and smell almost invariably come from the surface. Now, Mr. Editor, I dont want to disturb the stomachs of your readers, and prevent them from drinking water any more, for I am a teetotaller and believe that Adam's ale is about the best article of drink that was ever put into a tumbler. But I must say that I prefer a pure article.

It stands to reason that water will run down hill, whether it is pure or foul, and will keep running till it finds the lowest place, whether it's the bottom of the well or the lower end of a brook. We see this when we dig a ditch, or lay down a tile. If it is put down four feet in the earth, it will draw the water on each side, for a rod or more, right into it. If the soil is very compact, or made up mainly of black earth, it would probably absorb all offensive matters in the water, until it became saturated or charged with the foul gases, when a good deal of filthy water would go down into the drain and be carried off. Now I do not want to disgust any of your readers, by telling them that the contents of their sinks, vaults, and stables, drain into their wells. They might take it as an insult. But let them just look at the location of their sinks and vaults. If a drain four feet deep will draw water say twenty five feet distant, how far will a well of thirty or forty feet draw it?

Seth Twiggs thinks he cured his well by putting tile into his garden. That is only a part of the story, for the next season, he cemented his privy vault, and its contents now go regularly to the compost heap. The sink drain, too, that used to empty within ten feet of the mouth of the well, is now intercepted by a row of tiles, carrying the water after it leaches through the soil, off into the brook. The soil about his well is loose gravel, after you get down some four or five feet, and this has been made still more loose by the digging and stoning of the well. The water would go through the whole circumference back of the stones for four or five feet, about as readily as through a sieve. There is a great absorbing power in soils, but after a while they will not take up any more of the foul gases, and the sink water, and other offensive matters must go down to the level of the water in the well, with very little filtering.

How far a well must be removed from the sink and other offensive places, to keep the water pure, will depend somewhat upon the circumstances, as the depth of the well, and the character of the soil. A deep well, of course, would drain the surface much further than a shallow one. Dea. Smith's well is thirty five feet deep, and there is nothing offensive upon the surface nearer than three rods. I have no doubt that there is a connection between the sink drain and the well, and that this is the source, in most cases, of bad water in wells.

But it will be asked, probably, by some wiseacre like Jake Frink, why then don't the water taste as bad in Winter as in Summer? Jake don't see that it makes a mighty difference whether he have five pounds of good beef in his soup, or barely a knuckle of mutton. In Winter, the soup is diluted. Rains fall abundantly, and not unfrequently the wells are raised ten feet or more, so that they do not draw water from so great a distance. The water, too, is generally much colder, as it comes to the table, and the bad taste, if there be any, is not so perceptible, as in warm weather.

Seth Twiggs has hit upon the remedy. If a garden is not tile drained, the sink receptacle should be a cemented cistern. You can only keep foul matters out of your well, by taking care of them. Worked into the compost heap, and then applied to the lands, they will give you nice vegetables and health. In the wells, they will give you bad smells and disease.

Yours to command,
TIMOTHY BUNKER Esq.

Hookertown, Nov., 1860.

Draining Pays.

Two years ago, I put in stone drains about four rods apart, upon a piece of swale, with a muck top about a foot thick, and a heavy clayey subsoil, a perfect hard pan, that could only be moved with a pick. This helped the soil very much, and sunk all the springs that used to bubble up on the top in all wet seasons. I got a fair crop of potatoes last season, but they rotted some, and the ground looked as if it wanted more of the same sort. Last Fall I doubled the drains putting them in at two rods apart and about two feet deep, which was all the fall I could get. This season I have had a very large crop of Davis' Seedling potatoes harvested without a rotten one, and a second crop of Cow-horn turnips. Two such years will pay all the expenses of drainage, and leave the land worth four times as much as it was before it was drained. It is now prepared to be benefited by manure. I think well drained land, like this, will pay the interest on two hundred dollars an acre as long as it is cared for. I am so well pleased with the experiment, that I shall lay down tiles on all my swale land as fast as I can attend to it. EXPERIMENTER.

Amount of Rain in Connecticut.

The following facts in regard to the fall of rain the past year, are given by Prof. Johnston, of the Wesleyan University. During four summer months, the whole quantity of rain was 13 46 inches, while in the corresponding months of last year we had 19 inches. The average annual fall of rain in this region, according to the authorities, is 45 inches—snow being melted and measured as water—but during the past year (from Sept. 1st, '59 to Sept. 1st, '60) the whole precipitation has been only 33.52 inches, or about 11½ inches less than the average.... Though the fall of rain the last four months has been below the average for the season, the chief deficiency for the year ending with the close of August, was in January, February, March, and April. During these months, the whole fall of water from the atmosphere was only 7.7 inches, while in the corresponding months of the preceding year there was a fall of nearly 22 inches.:..In the Northern States, vegetation has suffered but little, owing to the frequent timely rains, though the entire amount of water which has fallen has been considerably below the average....The present season has been remarkably productive, and yet, at the same time, remarkably dry—not in this region only, but throughout the whole extent of our country ...We have therefore this remarkable fact, that the drouth of the present Summer has been occasioned chiefly by the deficiency of snow the last Winter! This and the other circumstance, that, while severe drouth in a certain sense has prevailed, vegetation has scarcely suffered, and the crops have almost every where been abundant, are the striking peculiarities of the present season.

For the American Agriculturist.

To Clean Tomato Seed.

Put the seed with the surrounding pulp on a piece of old muslin, 6 or 8 inches square, and sprinkle over it a small quantity of scouring sand. Gather the edges of the cloth in one hand, so as to hold the seed securely, and rub them gently in the palm of the other for a few minutes, dipping them occasionally in water.

This rubbing will cut the pulp from the seed. Pour the seed and sand into a basin of water, so that the pulp may be turned off. If the pulp is not all separated, add more water, and pour off again till it is clean enough. Now by putting in a little more water, and gently shaking and turning the basin, the seed may be poured separate into a sieve or cloth ready for drying.

Perhaps somebody has a better way, which he will give for my advantage, and perhaps he has not this, which I give for his advantage.

Litchfield Co., Conn. E. WHITTLESEY.

Keeping Cabbage in Winter.

It is well known that freezing cabbages does not injure them materially, provided the frost be drawn out gradually, and it is a common practice to bury them in pits or trenches out of doors, for keeping through winter. This answers a very good purpose, except that it is a rather troublesome operation to get at them when the ground is frozen hard, or covered with snow. Keeping them in the cellar of the dwelling, is objectionable, as partial decay is induced by the warmth and dampness, and there is a most unsavory and unwholesome odor ascending to the rooms above; or if the cellar be very dry, the heads do not retain their freshness. L. Bartlett in the Boston Cultivator, describes a method which he has used two winters past, by which these objections are obviated. [We have often practiced the same method satisfactorily, and described it long since, we believe.] He cuts off the stems, removes the loose outer leaves, and packs the heads in boxes or barrels with damp moss, such as is used by nurserymen in packing trees, roots, shrubbery, etc. These he has kept in the house cellar until March and in an out-door cellar, until late in Spring. Last winter, boxes so filled, were placed in the barn, and when frozen slightly were covered with straw, where they remained partially frozen, until April, without rotting or shriveling. When wanted for use, a head was placed in water an hour or two before boiling, and it then appeared as fresh as when taken from the field in November. He also suggests that clean straw cut fine and thoroughly wetted, might be successfully used instead of moss. It would be well worth while for market gardeners and others who wish to preserve cabbages, to make the experiment with straw upon a small scale; if successful it would be quite a saving of disagreeable labor.

Do You want Eggs in Winter?

Then give the manufacturers materials to make them with, and a comfortable place to work in. Let the egg-less say what they will, we speak what we know, when we assert that it is perfectly feasible to keep the hens laying all Winter. Give them animal food to supply the place of the insects they catch in Summer, and then let them have a warm place to run into, with plenty of unfrozen water, not snow, and a frequent taste of green food such as cabbage leaves, potatoes, etc., and remember to supply some gravel for their grinding mill, and lime to make shells out of, and we will warrant the animals to repay all the care and food, in nice plump eggs—no matter what the particular breed may be. Try it.

A hen without some kind of meat, and gravel, and lime, compelled to eat snow for water or go without, can not make eggs. If she has to keep constantly changing from standing on one foot to the other to keep both from freezing, she can't stop to think about getting up eggs. If all she eats and can digest, must be expended in keeping up the heat of her body, she has nothing left to turn into eggs. If her body is all shrunk up with cold, she hasn't room inside for an egg of respectable size, and though her instincts may sometimes induce her to produce a thin shelled "pullet's egg" at the expense of the lime in her bones, her pride revolts against such a dwarfed production, and she seldom furnishes beyond two or three.

Give Madam hen the odd bits of fresh meat, and the other fixings named above, not forgetting the water, and make her quarters so free from cold air-holes that she is *comfortable*, and she can't help giving attention to her natural occupation of manufacturing eggs, much to her own satisfaction, and the profit of her owner.

HOW THE TURKEY WAS NAMED.—An English writer says that in the time of Henry the Eighth, every thing foreign which was new and fashionable was called "turkey;" as the richest goods were imported by merchants whose vessels sailed up the Mediterranean, and who were called Turkey merchants. When the noble American bird was first served up on English tables, its excellence gave it the fashionable name "turkey" which has remained unchanged to the present.

Market Fair in Westchester Co., N. Y.

A correspondent at Katonah, sends a full account of a market fair for the sale of stock, grain, and other farm produce, held at that place Oct. 17th, under the management of the Bedford Farmers' Club. The numbers called out and the amount offered for sale, were greater than had been anticipated by the most sanguine. There were entered on the clerk's books; of stock, 95 cows, 53 horses, 15 yokes working and fat cattle, 10 young cattle, 5 bulls, 25 sheep, 13 hogs. Samples were shown of over 1000 bushels of grain offered for sale. Dealers in agricultural implements, and also merchants with goods suitable for the domestic market, took advantage of the gathering, to exhibit selections from their stock, and many sales were made.

About three-fourths of all the stock changed hands at private sale, and large lots of grain were disposed of satisfactorily. In the afternoon an auction was had, at which a large part of the remainder was sold. The necessary expenses were met by a small charge upon the various entries, and the affair was generally regarded as an entire success.

Similar favorable reports have heretofore been made in the few other localities in this country where the experiment of market fairs has been made, and it is probable, and we think very desirable, that they will in a few years become a fixed institution in all the more thickly settled portions of the country.

To Cure Hams, first ascertain what is the matter. Then apply proper remedies; if you do not succeed in curing them, it isn't your fault.

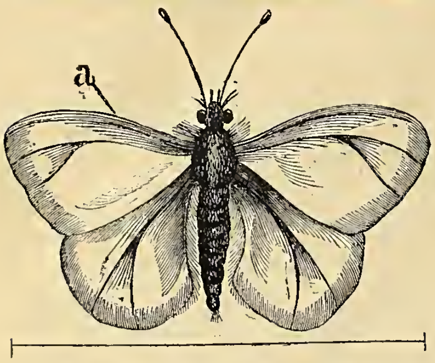


Fig. 1—Pontia Oleracea—the perfect insect.

Microscopic Views of the Insect World..

NO. VIII.

BY MRS. CHARLOTTE TAYLOR.

WHITE CABBAGE BUTTERFLY.—*Pontia Oleracea.*

No insect has called forth so much attention for the last two years, judging from the notices I have received of it, as the one shown above at Fig. 1. It is not at all surprising; few can equal it in its depredations in the kitchen garden. There is no doubt it is the Pontia Oleracea, potherb Pontia of Dr. Harris—the Pontia Rapæ (Haworth) of Europe; therefore it is useless on account of some trifling discrepancies to class it differently, or to substitute another name. It corresponds in every particular with Dr. Harris' insect, except in the location of the eggs. He says "they are fastened under the lower part of the leaves, three or four on each." I have never found *her* eggs deposited in any place except just where the leaf joins on to the cabbage stalk—down in the rim of the midvein, *d* Fig. 4. The formation of the egg, *b* Fig. 2, shows the necessity for this—it is pear shaped, yellow at first, deepening in hue as it becomes old, most exquisitely ribbed and flatted, a charming little atom, just right for a Fairy's ear-drop.

Two weeks, sometimes less, from the time of the deposit, small green caterpillars emerge. They do not confine themselves to the cabbage—the whole cruciferous family of plants receive their attention; broccoli, cauliflower, turnips, none of them come amiss. However, it properly belongs to the cabbage, and I shall treat it as such. When feeding on this plant, it is found only on the under side of the leaf, devouring the pulp, leaving the veins untouched. It is a very singular fact which you may notice yourself, that no leaf is eaten except it inclines vertically; their mandibles or jaws *cut upwards* and never on a line with the head, therefore the *edge* of the leaf is never touched. It is quite impossible to show their jaws on paper. They are small horny points, put into action by the will of the insect. As soon as life is extinct, they disappear within the head, and become merely little protuberances among the muscles; and if you try to see the movement by holding a piece of mirror beneath them, the lower part of the mouth protrudes so much, it quite conceals the motion. The jagged cut in the leaf, *c* Fig. 4, when freshly done, shows distinctly how it is accomplished.

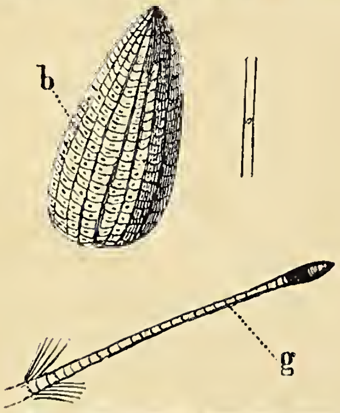


Fig. 2—*b*, Egg of the Cabbage Butterfly, highly magnified. The natural size is shown by the dot between the lines on the right. *g*, an antenna.

The time of feeding varies, being three weeks or more. When arrived at this age, they may be considered full grown. They are now an inch and a half long—a beautiful transparent green, of the same hue as the cabbage, covered with soft white hairs, which are imperceptible without a glass. They moult four times with little effort, and generally at night or early dawn, coming to the surface of the leaf, and when abundant, their discarded skins give that shimmering luster often seen on cabbage leaves.

When it has fed sufficiently, it crawls off to twigs, old stumps, or palings, or most generally any shrubs near by, as currant bushes, etc., it crawls up a branch, and spins a tuft of silk, into which it fastens the hooks of the hindmost feet, and then proceeds to spin a loop. With its head bent over the middle of its body, it fastens a silken thread, bringing it back and confining it on the other side, *e* Fig. 3. Back and forth moves the patient head, slowly evolving the silken cable, until it concludes it is strong enough to prevent it from falling. It then rests awhile, gradually contracting its skin, which bursts in a day or so, and leaves the chrysalis firmly secured to the twig, *f* Fig. 5. It is of a pale green if the caterpillar has fed well; if not, it is a soiled white, always regularly spotted with black dots. From the tubercle of the head you often find a silken thread many times doubled, thrown over a second branch, so as to give double security, *f*, fig. 5. This generally occurs in Autumn, when it will remain over all Winter, and is necessary to secure it from being shaken off by storms of wind and snow. If this second string is omitted, it is considered a prognostic of a very mild Winter. In Germany there is an old adage "when the caterpillar has two belts, pile high the wood"—no doubt alluding to this circumstance.

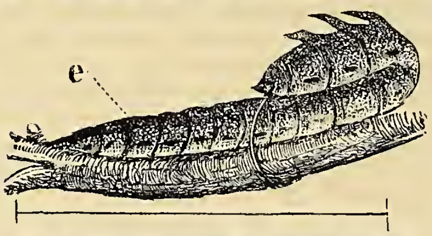


Fig. 3—*e*, Larva, or caterpillar spinning the belt.

In two weeks more the butterfly comes forth, *a* Fig. 1. It is quite white, except near the body, here and there a fleck to make it appear whiter, one or two faint lines are seen like veins; the under parts of the wings are shaded with yellow, the second pair the darkest, and near the body are of a deep yellow; the veins too are very distinct and well defined on the under side. The body and head are black except a few pale hairs to show the segments of the abdomen. The antennæ, *g* Fig. 2, have rings of white, the knobs are flattened, and are of an ochre yellow. The palpi are slender, a few hairs, and project somewhat beyond the head. This insect belongs to the Lepidoptera division. It is a true Papilionite or Butterfly, flies during the day, belonging to the subgenus Pontia, having the wings always erect and meeting at the back when it is at rest. They are remarkable for their pugnacious disposition. Whenever you see a dozen or more quenching their thirst around a pond or a pool of dirty water—for they are not *particular* when imbibing—a fierce battle is sure to ensue. They commence by jostling one another on the bank or edge of the water, thrusting their antennæ at each other, flapping their wings, then the melee commences, and often becomes so deeply interesting that their natural enemy, a bird, or a member of the Libellalina or dragon fly family pounces in and devours one half of the struggling combatants before the others have discovered the ill-omened presence.

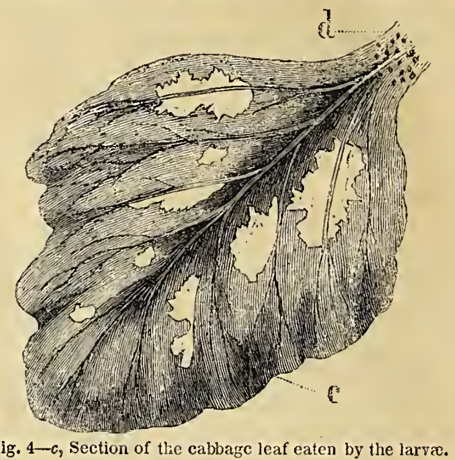


Fig. 4—*c*, Section of the cabbage leaf eaten by the larvæ. *d*, Location of the eggs.

This insect is to be found in every part of the country where its food is cultivated, from June until November. There is no excuse for any one to be troubled with them. As you perceive they undergo their transformations above ground, by carefully searching around and over your cabbage bed, you can easily discover the chrysalides and destroy them in the Fall. The caterpillar is the natural food of the Chickadee and Sparrow; one or more of these birds caught, tied by the legs, and allowed to fly over the bed, will clear them out in a day or so. The butterfly is hunted with the utmost persistency by the dragon fly family. I have seen the ruby red dragon fly of the South and Middle States take off the heads of a half dozen in less than a minute. Then again there is the ever useful toad—he is a host in himself—give him a home in your cabbage bed and he will do you right good service. My pets of the past Summer would eat these caterpillars by the hundred at a meal, and though sometimes filled to bursting, there was always room for one more of these dainty little fellows.

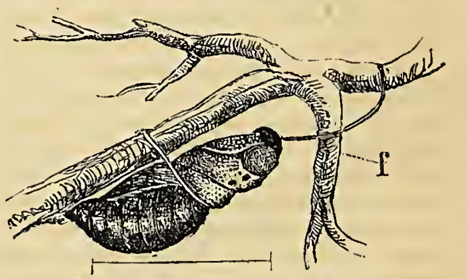


Fig. 5—*f*, Chrysalis secured to a twig.

◆

BEES ROBBING A VINEYARD.—The California Daily Bee, states that ten thousand hives of bees are kept in and about Sacramento, where flowers are scarce, and that they pick up their living as they can find it. Among other expedients, they this year resorted to the vineyards, attacked the choicest sweet grapes, sucking them dry, and making great havoc.

Familiar and Useful Notes about Common Birds.

"Spare the Birds," has been a frequent heading to sundry articles appearing in the *Agriculturist* and other journals, for years past; yet very few people even among those who are daily surrounded with the "songsters of the grove," have any acquaintance with the character, habits, or usefulness, of the most common small birds. Perhaps not one person in ten can give a name to most of the birds that they have daily seen for a dozen or twenty years. This subject is one not only of intense interest, but of real utility, especially to the cultivator. We therefore think it will add to the interest and the practical value of the *Agriculturist*, to introduce from time to time descriptive notes and illustrations of a few at least of our common birds, and we are happy to receive the aid of a competent observer in this department, L. E. Chittenden, Esq., of Burlington County, Vt. These notes will be of a popular rather, than a scientific character, though while mainly avoiding technical terms, we shall endeavor not to do any violence to the science of ornithology.

Very few of our familiar birds dwell in the deep solitude of the wilderness—their habitations are near the abodes of civilized man. The traveler in the western wilds will meet with few of the sparrows, warblers, thrushes, and rapacious birds, which are so abundant in the groves bordering upon our cultivated fields. A word or two of explanation.

By SPARROWS we mean that family of birds having a short, robust, or strong, round, conical beak, like the canary bird or the common "Chipping bird" (*Fringilla socialis*). The sparrows subsist mainly upon seeds.

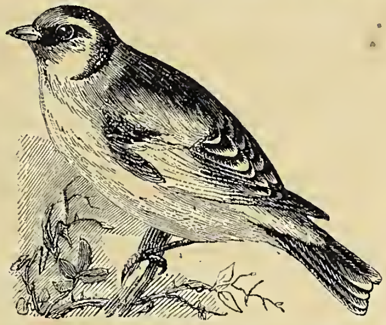
WARBLERS include all those smaller birds having a slender bill of moderate length, and which are more or less musical. These subsist upon small worms and eggs of insects. The yellow warbler, so common in our gardens in Summer, is a familiar example of this class.

THRUSHES belong to another family of soft-billed birds of larger size, generally more or less musical, like the robin and cat-bird.

The freezing of the ground, ponds, and swamps, cuts off the supply of food suited to the slender bill birds, except those subsisting on the eggs of insects, and this compels a migration to warmer latitudes, so that we have with us in the coldest season only a limited number of sparrows, and some of the wrens and wood-peckers. These, especially the sparrows, remain with us in Winter in much larger numbers than is generally supposed. Other birds will be referred to in our particular descriptions. We begin with one or two of the sparrows.

THE AMERICAN GOLDFINCH, OR "YELLOW BIRD."
(*Carduelis tristis.*)

We recently asked an intelligent farmer, whether he supposed this bird remained in New-England during all the Winter. He replied unhesitatingly, No, for he must have seen them, if such were the case. We exhibited to him one in its Winter plumage, which was so widely different from its Summer garb, that he insisted it was not the same bird, and as he would not acknowledge the force of evidence which would be conclusive to the ornithologist on the question of identity, he remains unconvinced to this day. But it is not the less true, that this lively little sparrow that glances so brilliantly in the light of an August sun, with its jet black wings and light yellow body, and which is known to almost every farmer's boy in New-York and New-England as the "Yellow bird," can not be called migratory in its habits, but remains with us during the cold and storms of our longest Winters. True, he fits himself for them. The human denizen of the same geographical limits does not make a greater change between his Summer and Winter clothing, than this little bird. He does what human fashionables often do not—he even observes the *proprieties* of the case. The warm tints of his summer vesture would be ill suited to the snows, storms, and clouds of Winter: accordingly, while the light, tufty feathers of his body, wings, and tail become thick and compact, and very much increased in length, they at the same time assume a more sombre hue. The yellow body is changed to a Quaker-like brown, and the jet wings grow lighter, and are crossed by two transverse bars of pure white. The tail nearly doubles its length, and becomes more forked.



HABITS AND INSTINCTS.

The habits of this bird seem in Winter materially changed. While in Summer they are commonly seen in pairs, and in early Autumn accompanied by their young, when strong enough for flight, in Winter they become gregarious, individuals coming together in large flocks, sometimes numbering hundreds. Its flight, too, is changed. In Summer it is performed in deep curved lines, alternately rising and falling after each propelling motion of the wings. Each of these curves is accomplished while uttering one or more of its sharp notes, the one accompanying the other with almost the regularity of a clock. The curveting movement could hardly be carried out in a large flock, and in Winter this peculiarity is lost entirely. The whole flock then moves straight onward, or in long graceful swoops, as if animated by a common instinct. The following account of its instinct is given upon the authority of that most accurate observer of the habits of North American birds, the veteran AUDUBON: "There is a trait of sagacity in this bird which is quite remarkable. When a goldfinch alights on a twig imbued with bird-lime, (a gluey substance, expressly for the purpose of securing it,) it no sooner discovers the nature of the treacherous substance, than it throws itself backwards with closed wings, and hangs in this position until the bird-lime has run out in the form of a slender thread below the twig, when feeling a certain degree of security, it beats its wings and flies off, doubtless with a resolution never to alight in such a place again. I have observed those that had escaped from me in this manner, when about to alight on any twig, whether smeared with bird-lime or not, flutter over it as if to assure themselves of its being safe for them to perch upon it."

Birds, like other animals, require an increased nutrition in cold weather. The bodies of all warm-blooded animals are caloric factories, which are run at a full or lesser speed as the season requires; and the rapid motion of their complicated machinery requires an increased consumption of fuel, which is but another name for food.

"But what of all this?" says the farmer. "What is this to me? Yellow birds are well enough in their way, no doubt, but of what possible good are they? Why should an agricultural paper fill its columns with matter which would be well enough in a bird book, but which is all out of place in a practical newspaper!" Softly, good friend! Be not so hasty with your condemnations! Watch this little bird more closely, and you will find him to be a most active and industrious friend. All through the long months, from September to April, he is hard at work for you. In the fence corners, beside the hedges, along the highways, around the stone-heaps, in many places, the thistle, nettle, white daisy, and noxious weeds of an hundred different species, which too often escape the attention of the most careful husbandman, have grown up to rank maturity. In the swamp edges are many patches of rank wild-grass which you have not found time to cut down. Left uninjured where they are until Spring, filled with their thousands of seeds, they would be scattered all over the farm or garden, giving a crop next year, neither useful nor ornamental. It is upon the seeds of these thistles, daisies, weeds, and rank grasses, that he and many other similar species live. Wherever his food is to be found, you may see him, tearing up and down the withered petals of the ripened flower, leaning downwards upon them, eating off the seed, and scattering the down through the air. The eye of many of these small birds is one of the most wonderful things in nature: its structure enables the bird to detect its appropriate food at a long distance, and when once he has perched upon a plant, he rarely leaves a single seed.

The amount of food which one of these birds requires, is very large in proportion to the size of his body. The ceaseless activity of his muscular system during the day, can only be kept up by a corresponding amount of nutriment. Every lady who has kept a caged canary bird, knows something about his appetite. The power of flight of the goldfinch is very strong. He is a clean worker. Before snow falls, he gathers up all the seeds which have fallen upon the ground, as well as those which adhere to the parent stem; after the snow falls, he is, of course, compelled to live solely upon such food as he can find above its surface, but he rarely abandons one field until he has exhausted the supply of food to be found there. We have known single localities, where the highway was infested with the Canada thistle, which a flock of these birds would not abandon for almost the entire Winter. It is obvious that the amount of noxious vegetation thus prevented for the coming year, would be very large.

It may not be out of place here to say a word about its nest and eggs. The exterior of the nest is composed of various lichens (mosses), fastened by the saliva of the bird, and lined with cotton or other soft materials. It is found at various distances from the ground, upon small shrubs as well as high trees. It is sometimes attached to the side only of a small twig. The eggs are five to six in number, of a bluish white, marked at the larger end with spots of reddish brown. Only one brood is reared during the season, and the young are fed from the mouth, in the same manner as the Canary.

For the American Agriculturist.

Preservation of Turnips.

We want nothing better for this purpose, of course, than a good root room, or cellar in connection with the barn. But not one farmer in ten, has any such convenience, and the roots are stored in the house cellar, an inconvenient place, and often too warm for them. Turnips may be kept quite as well out of doors. Select some dry sheltered spot near the barn where they will be wanted for feeding. Make a floor for the heap, by raising the ground about six inches above the surrounding level. The floor should be about six feet wide, and as long as is needful to accommodate the turnips. Pile the turnips upon this, running them up to a peak like the roof of a barn. Cover first with straw, sea weed, or any refuse matter, two or three inches thick. Then put on from six inches to a foot of earth, according to the severity of the climate, and pat the roof smooth with a shovel. Leave holes for ventilation once in six feet along the peak. In severe weather, as the Winter advances, stop these holes with straw. The turnips, ruta-bagas, or white French, will keep safe until Spring. If they are wanted before, one end of the heap can be opened and the hole stopped with a pile of straw. CONNECTICUT.

For the American Agriculturist.

Hints on Beet Culture.

I have just gathered my first field crop of sugar beets and mangel wurzels, two hundred and twenty bushels from twenty seven square rods of land. I had one load weighed after the tops were off, and the average was just fifty six pounds to the bushel. This is at the rate of 1300 bushels, or 36 tuns to the acre, which, judging from other crops I have seen reported, is quite respectable for a beginner. I had tried them in the garden on a small scale before, and learned something of their value for feeding. The common estimate made by English farmers, of three tuns of beets to one of hay, is none too high. In our more sunny and genial climate, I have no doubt that the beet contains a larger portion of nutritive matter than in England. They are of great value as feed for milch cows in Winter. A milkman in Troy, N. Y., after experimenting with other roots used for this purpose, gives the preference to the sugar beet.

This crop, large as it is, is an imperfect one. The seed was sown in May and not more than half of it came up. The defective hills were supplied by transplanting in July. These transplanted roots were, in most cases, not half grown, weighing only six to eight pounds, while many of the planted roots weighed from twelve to eighteen pounds. I have no doubt that under favorable circumstances, two thousand bushels to the acre can be grown. This amount has been reported in this country. Thirteen hundred bushels to the acre, reckoning three tuns of roots equal to one of hay in nutritive value, is equivalent to twelve tuns of hay to the acre. This is about four times the ordinary produce of the farmer's best fields. Two thousand bushels would give fifty six tuns of roots, the equivalent of 18⅔ tuns of hay to the acre.

This crop was grown upon reclaimed salt marsh, under-drained about two feet deep with tiles. Last year it was planted with potatoes, and produced a good but not very large crop. This last Spring, it was dressed with a few loads of old plaster from a demolished house, and this with a little Pheux Island guano, was the principal manure. The sugar beets were planted in drills eighteen inches apart, and the mangels in drills two feet apart. Both stood about a foot apart in the drill. This I prefer to any nearer distance. You get a much larger crop with the large roots, and they cost less to till and to handle at harvest. The experiment teaches;

1st. That the beet is one of the most valuable crops that can be raised on suitable land. It is difficult to get the equivalent of twelve tuns of hay in anything else.

2nd. That reclaimed muck swamps are very well adapted to this crop, especially if they are underdrained.

3d. The value of salt for this crop. There was enough left in the marsh muck to meet the wants of the plant. Salt is used by the best cultivators in England, at the rate of about six bushels to the acre.

4th. The importance of good seed and early sowing. The beet, unlike the carrot, grows rapidly the forepart of the season, and through the heat of Summer. The last of April is none too early to sow, in this latitude.

5th. The value of high manuring. This piece of land, though not receiving much this year, was very liberally dealt with the previous season. I would manure with at least fifty half cords of compost or stable manure on upland, and half that quantity on muck swamp, and plow in. If too late for that operation, I would spread the manure during the Winter, and plow in early in the Spring. The manure should be well diffused through the soil. CONNECTICUT.

Curing Beet and Turnip Tops.

In seasons of short hay crops for fodder, and also upon farms where large quantities of roots are raised annually, the following method of curing beet and turnip tops may be found serviceable in adding to the supply of fodder. It is described by an English farmer in the Mark Lane Express, and is said to be regularly practiced in France and Belgium, where root culture is extensively followed. The plan may be good —we give it as we find it.

The roots are taken up in dry weather, the tops cut off close to the bulb, and carefully laid in small heaps. Trenches, twelve or fifteen feet wide, are opened, as for storing potatoes or turnips, and as deep as the dryness of the soil will allow. If the land be quite wet, the trenches should be dug quite shallow, and the ridge or heap of the leaves raised above the surface. When the trenches are ready, a layer of tops eight inches deep is put in, gently pressed down, and salt sprinkled on at the rate of three-fourths of a pound to every four cubic feet of tops; then another layer and more salt are added, and so on, drawing in each layer until a ridge is formed at the top above ground. Earth is then thrown over the whole, and beaten smooth and hard with the spade, and a drain is dug around the trench to carry off the water that is shed from the sides. As the moisture evaporates from the tops, they will settle, and cracks will be opened in the earth above them, which must be smoothed over, to shed rain perfectly.

The lower layer of leaves should be thicker than the upper ones, to prevent their becoming too salt by the drainage from above. No straw is used, it would retain moisture and rot the leaves. The evaporation and curing will be complete in about six weeks, when the fodder is ready for use, and, it is said, will remain good until late in Spring. When thoroughly cured, the foliage is quite dry, and has the appearance of dead leaves.

It is said to be particularly valuable for milch cows, increasing both the quantity and richness of the milk. The usual quantity fed, is about one bushel a day to each cow. All animals relish and thrive well upon it. When fed green, especially during wet weather, the leaves are apt to scour animals that eat them.

Summer Rambles in New-England.

It was our pleasure, during the last Summer season, to make several excursions in the New-England States; and our recollections of sundry visits are so pleasant, we desire to note them.

Middleboro, in Massachusetts, is a pleasant region of country, diversified with small lakes, gently swelling hills, well-tilled farms, comfortable dwellings, and various other tokens of general prosperity. In some portions of this large town, the farms, with a soil naturally light and unproductive, have been over-cropped and rendered almost barren and useless: several of these, however, are now being restored to fruitfulness by the hand of diligence and skill. In the latter case, the chief reliance is placed on plowing under green crops, and on swamp-muck continually used in the barn-yard as an absorbent of liquid manures and for working into the compost heap. Muck is also prepared for use by mixing with it lime or ashes, and by letting it lie over one Winter for the frost to "sweeten" it. Then it is spread upon the dry uplands, young orchards have a dressing of it, gardens get a taste of it, and wherever it goes, it blesses the hungry earth. Judging from what we saw on one farm, in particular, we know the time is not distant when the broad acres of "Ward Place" will teem with fertility, and its lawns and gardens and spreading trees delight the eye of every beholder. Farmers whose lot is cast on the fat lands of our river valleys, have little idea of the difficulties their brethren have to contend with, who live on the thin, sandy soils of the sea-coast and its vicinity—if the latter succeed in their work, they deserve double honor.

Here we are at New-Bedford. Oil does not indeed run down her streets, nor cover the waters of her harbor, yet the prosperity of the town is almost wholly built upon it. The whaling business, which has been much depressed for three years' past, is now rapidly reviving, and the whole town feels the new impulse.

New-Bedford, we were told, is the wealthiest city of its size, in the country. Here are many fine residences, with ample gardens, and grand old trees, all in good preservation. On many of the streets, the houses are not crowded together in dull blocks of brick and mortar, but set at wide distances, allowing room for generous lawns and various rural embellishments. One of the finest old places here, is the property of Dr. Arnold. It was noted as long ago as Mr. Downing's day; the following mention of it appears in the earlier editions of his "Landscape Gardening," page 41: "In the environs of New Bedford, are many beautiful residences. Among these, we desire particularly to notice the residence of James Arnold, Esq. There is scarcely a small place in New-England, where the *pleasure-grounds* are so full of variety, and in such perfect order and keeping, as at this charming spot; and its winding walks, open bits of lawn, shrubs and plants grouped on the turf, shady bowers and rustic seats, all most agreeably combined, render this a very interesting and instructive suburban seat."

Since the above was written, the character of the place has changed a little. The "shrubs and plants grouped on the turf, and the shady bowers," have been removed, and the whole area of the front lawn is devoted to grass and trees. The turf is kept in the finest possible condition, smoothly shaven, rolled, neat, and in every way perfect. The trees are now quite large and venerable. Norway Spruces lift up their dark, symmetrical spires forty or fifty feet high. English lindens and horse-chestnuts and weeping Ashes and elms, show what these several trees will attain to, when allowed time and room and a "smart chance" to grow. Passing to the rear of the house, we find ourselves among green-houses, graperies, vegetable gardens, flower-gardens, and fruit gardens, all ingeniously connected by curved walks. Here we noticed beds of verbenas all ablaze with masses of brilliant colors; and then came petunias, scarlet geraniums, Japan lilies, gladioli, (lacking, however, some of the fine new varieties,) dahlias, asters in great variety and excellence. Here, too, were pear trees, plums, peaches, apricots, some of them trained on walls and loaded with fruit.

Perhaps the most *striking* feature of these gardens is the Summer-House. It is about twelve feet in diameter, and fifteen or sixteen in hight, and is octagonal in shape. The roof is supported by pillars of unhewn granite, and covered with tiles. Just outside of the pillars, the ground is strewed with bowlders and loose fragments of rock, over which clamber periwinkle, moneywort and other trailing vines. The floor is paved with large, smooth flagging stones. In the center is a rustic circular table, the top of which is made of rattan closely inlaid and varnished. Around the table are ranged several rustic sofas, the legs and arms of which are wrought from the twisted and knotty branches of some sort of tree, and the seats and backs, of rattan-rods. But now, look overhead! Was that rudely vaulted ceiling stolen from a grotto of sea-nymphs? It is covered with marine shells almost numberless and of every conceivable variety, placed there, too, (as a lady-companion informed us) by the skill and patience of the wife and daughter of the proprietor. They were put there before the days of "Spalding's Glue," yet they adhere to the ceiling very firmly. Had there been a conchologist in our party, we fear he would have stripped the roof of some of its treasures: as it was, we only sat and admired, and went away in wonderment.

From this point, the walks diverge in several directions into a large grove, composed partly of native trees and partly of foreigners. The majority of them have grown to a large size, and make a shade almost as dense as an ordinary forest. In several open places, are shrubs and flowers and specimens of the newer evergreens. In one secluded nook is a monument to a Newfoundland dog. Here and there, are rustic seats to refresh the weary. This grove is so completely shut out from the street by tall hedges and masses of trees, that one can walk a long while, and yet seem to be far from all human habitations and society. The walks are so skillfully disposed, that a stranger can form no definite idea of the size of the grounds. If the writer of these lines were asked how many acres they contained, he could only reply—"somewhere between five and ten." We at length found our way out of the labyrinths of garden and grove, and reached the outer gate, filled with admiration of what we had seen, and, not the least, of the generosity which throws open such grounds to the free inspection of the public.

Of our glances at other residences, of our ride along the splendid, breezy roadway around "the Point," and of the generous hospitality which greeted us at the house of a friend, we can not speak at length; but they are not forgotten.

Spontaneous Vegetation.

It is a well known fact, that on the first clearing up of a new country, a new species of vegetation springs up; new woods, new trees, shrubs, vines, grasses, all appearing as if they had been sown and planted by some invisible hand. Burn over this land, and still another set of plants come to light, as if the fire had brought them into being. Then again, dig up marl for manure, out of the earth 10 or 15 feet deep, moisten a lump of it and cover it with a glass bell so that no floating seeds can light upon it, and soon white clover and other plants will be seen starting up from its surface. In some regions, the *Sinapis arvensis*, a kind of Mustard, generally grows up from clay taken from very deep wells.

Facts like these have led many persons to suppose that the earth has power to bring forth certain products without the sowing of seed upon it. Else, they inquire, how could seeds lie buried so deep and so long, and not perish? Vegetable substances, as a general rule, decay rapidly, and why should seeds be an exception to this rule? And what agency has fire in promoting vegetation?

We do not believe that nature has the power of spontaneous production, either in the animal or vegetable kingdom. In the cases above referred to, we believe these plants were the descendants of others like them, growing at some former time on the same soil, or in the immediate neighborhood. The seeds may have been deposited there by floods or freshets, by the winds, by animals or birds. We have seen rice taken from the crops of pigeons which had flown a hundred miles since eating it. Some seeds will germinate only under certain conditions. In the cases first alluded to, these conditions may have been wanting, until the seeds were brought up from the deep soil of the well, or until the forest was cut down, or the fire cracked the hard and flinty shell. Every body knows that wheat and other cereals taken from Egyptian mummies several hundred years old, have afterwards germinated. They could not vegetate as long as moisture and other favorable conditions were wanting. So it is in all cases with seeds and plants.

Notes on the Newer Grapes.

To the Editor of the American Agriculturist.

Noticing your call for reports on the qualities of the newer native grapes, I venture to send you a few notes, such as they are.

I have, this year, eaten the *Northern Muscadine*; and while it does not rank with the Black Hamburgh or Delaware, it yet has merits. It ripens early (by the 10th of September,) is very sweet, and it is tolerably prolific. By thinning out the bunches, those remaining became of good size. He who has a large garden, and who can not ripen the Isabella, might plant one specimen of this Shaker Seedling.

The *Logan* fruited with me, this year, for the first time. If I may judge from one year's experience, it ranks higher than the Concord, and hardly inferior to the Isabella, in flavor. But then it ripens three weeks earlier, and a little before the Concord. The wood is quite hard and short-jointed, ripening up before frost, clear to the extremities: it must be hardy enough for any body south of Labrador. My vine this year has grown eight feet of wood on each cane. As to the fruit, let me say that it is of medium size, both in cluster and berry, black as ink, yet with a beautiful bloom, compact and heavy. My vote is that every fruit-grower north of latitude 42° should put down his name for two Logans.

The *Rebecca* is not new to everybody, but it is little known to many. Some persons who have given it only a brief trial, have not been as successful with it as with the Concord and Delaware; and their doubtful reports have deterred others from trying it. But please let me tell *my* tale, so as to give both sides a fair chance. I have now grown it for four years, and fruited it three. Its growth the first year was feeble, but since then, it has been all that could be desired. A year ago last Summer, a few of the leaves on one vine became a little rusty, thus showing a slight tendency to mildew, but so did the foliage of my Dianas, and Isabellas. During the Summer just past, the leaves were fresh until cut off by hard frosts. For two years past, my vines have borne well, the clusters and berries being larger than the Diana, and as abundant. As to the quality of the fruit, perhaps I am a poor judge; but I candidly think it *superior* to the Delaware or Diana. With those who want a very sweet grape, it may not be as acceptable; but for me it is sweet enough, and is more sprightly and refreshing, and resembles some of the best exotic grapes. It ripens along with the Diana, and on this account becomes a better keeper in Winter than the Delaware. In short, I find no fault with it: it is hardy enough, fruitful, early in ripening, cluster and berry of good size, and quality first-rate; my pet grape.

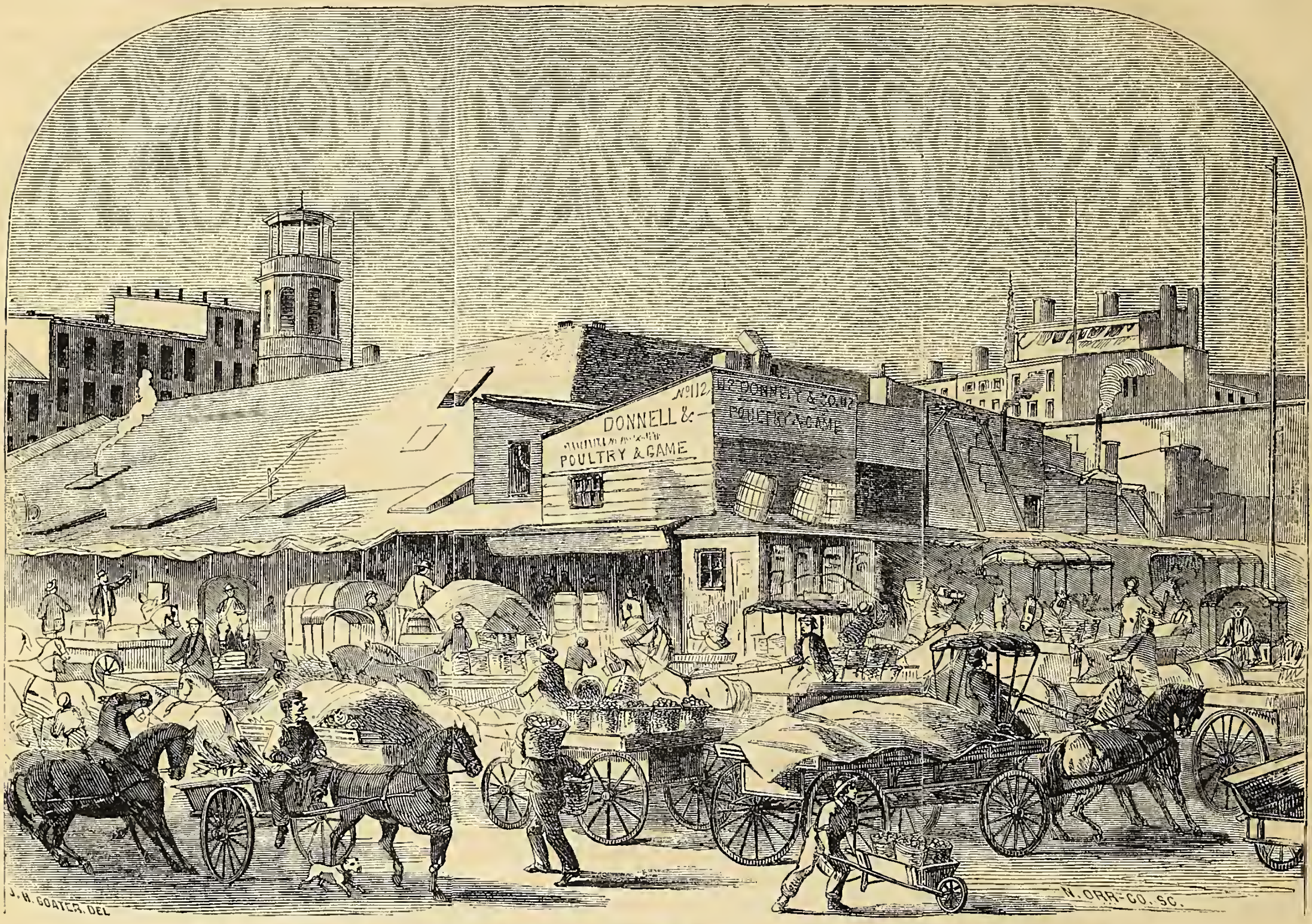
Miller's Burgundy, is an old customer and a foreigner, but it has done so well with me for several years, I wish to say a word in its favor. It needs a little covering in Winter. The fruit ripens with me before the Isabella. How closely the berries are packed around the stem; you couldn't get a needle between them! And then, how juicy, brisk and sparkling the fruit is! Those last two adjectives express its quality exactly. Put in one root of Burgundy.

In a late number of the Country Gentleman, I see that Dr. Kirtland, of Ohio, famous for originating several excellent sorts of cherries, thinks highly of the *Cuyahoga* grape. "He regards it as the best of all the new American sorts, being superior to either the Diana or Delaware—vigorous, very hardy, as early as the Diana, and as delicious as the best exotic kinds." This surely is saying a good deal, and being said by a man of Dr. Kirtland's judgment and impartiality, deserves the notice of all lovers of the grape.

Oneida Co., N. Y., Nov. 6th, 1860. ONEIDA.

Heated Grape Vine Borders.

In some of the English Graperies, not only are the *houses* heated, but the *outside borders*, have hot water pipes arranged in a chamber beneath them, so that the temperature of the soil is increased at will. A pot is plunged into the border, and in this is suspended a thermometer, by which the heat is regulated. The Gardeners' Chronicle thinks the time will come when as much attention will be given to heating the borders, as to covering the vines with a glass roof and forcing the out-of-ground portion.



WASHINGTON MARKET, NEW-YORK CITY—THE "BABEL" OF THE WESTERN CONTINENT.

(Sketched and Engraved for the American Agriculturist.)

Of all the noteworthy "sights" in this city, few will afford more food for thought, or better repay a visit, than some of the *Markets.* In one sense, New-York itself is a great market; its long lines of wholesale warehouses, and the crowded shops of retailers, are, so to speak, the stalls, into which the mart is divided. But there are a few great centers to which all imports flow, and from which radiate the minor streams of trade, that carry supplies to every household. Thus: Wall-street is the money center, the *pocket* of the city; Broadway and a few streets emptying into it, are the headquarters of the dry goods trade, the *wardrobe;* the printing establishments cluster in Park-Row and Nassau-street, and they are the two lobes of the *brain* of New-York.

Of the provision markets, the *larders* of the metropolis, there are several, located in different sections of the city—the principal one being *Washington Market,* a sketch of which is given above. It is situated in the lower part of the city, between Fulton and Vesey streets, and extends from Hudson River to Washington-street, covering an area of about 12 acres. One unacquainted with New-York, would naturally expect to find such an establishment not only large, but convenient, well regulated, affording every facility for the immense business transacted, and, perhaps, of some architectural pretension. A glance at the picture will at once remove such an impression, though no engraving can do justice to the shabby, ill-arranged, dilapidated wooden sheds there huddled together. Only the main building is here shown, from a point on the corner of West and Vesey streets. West of this, nearer the river, is a large collection of one-story board shanties, newly constructed, the former hovels having been recently burned. The whole collection of buildings is divided and subdivided into stalls, averaging ten or twelve feet square, each of which is, in most instances, rented by a single individual or a firm.

The establishment of a market had its origin quite early in the history of the city. In the year 1656 the following resolution was put in force:

"*Whereas,* Divers articles, such as meats, pork, butter, cheese, turnips, cabbages, and other country produce, are from time to time brought here for sale by the people living in the country, and oftentimes wait at the strand (foot of Whitehall-street) without the people living out of that immediate neighborhood knowing that such things are for sale in town: Therefore, Saturday of each week is fixed as a market day, and the articles are to be brought on the beach near Hans Kiersted's house, of which all shall take notice."

This was called the "Oswego Market," and was located near the Battery. As the city extended farther north, the location was changed to the present quarters, and the building erected was named "Bear Market"—a bear having been slaughtered at the opening celebration—but it has since been called Washington market, from the street on which it stands. As trade increased, temporary sheds were added to the original structure, which became permanent fixtures, resulting in the present heterogeneous mass of hovels." According to the "World," from which we gather some items here noted, the whole number of stalls rented is 474, occupied as follows:

Butchers	100
Vegetable dealers	50
Poultry and game dealers	14
Fish dealers	16
Oyster Dealers	10
Grocers, hucksters, eating stands, etc.	284
Total	474

In addition to these, the streets adjacent to the Market, are crowded with vehicles, bringing in produce from the surrounding country, which is sold direct from the wagons. Frequently, lines of wagons extend more than two miles in length! Every available space in and around the market is occupied. Retailers of small wares, pins, needles and tape, crockery, baskets, cigars, confectionery, brooms, trinkets, in short of every thing eatable, drinkable, wearable, or usable, crowd every nook and corner, until the narrowest possible passages are left for the struggling crowd that daily throng these precincts.

During every hour of the day and night, the roar and tumult of business is heard here. Early in the evening, the market gardeners, from all points within ten to twenty miles of the city, begin to take up their stations for the following morning's trade; by midnight the adjacent streets are crowded with their loaded wagons. By one o'clock in the morning, meat men are astir, bringing in and arranging dressed carcases of beef, mutton and pork. An hour later, the grocers and retail butchers are thronging in to purchase supplies, and the *Babel* commences. There is racing, and crowding, and jamming, to secure favorable positions; buyers and sellers, men and women, are hustled and squeezed, shouting, quarreling and cursing, stun the unaccustomed ears; and to a stranger the scene is absolutely bewildering. To cross the streets in the neighborhood is a dangerous feat, to be accomplished, sometimes, only by clambering from wagon to wagon. Not unfrequently, two lines of vehicles meet and block up a street. We have seen a throng thus packed together unable to move in either direction for more than an hour. Our artist has given as much of the scene as could well be shown on paper; it must be seen to be realized. We advise our readers who would enjoy one of the greatest "sights" in the City to take an early start from their lodgings, and visit Washington Market just at daylight; they will agree that the half has not been told.

Notwithstanding the ill-regulated and totally inadequate accommodations, the amount of business transacted is immense, and is scarcely equaled in any other market in the world. The sales of individual dealers amount to from five thousand to three hundred thousand dollars, and upward, per annum. From a single stall, twelve feet by six, the sales of carcasses of beef and mutton amount to over fifty thousand dollars annually. One firm of dealers in Poultry and Game have an annual trade of over two hundred thousand dollars! A firm in Albany receives every season for stock dressed for the stalls of this market, three hundred and fifty thousand dollars. The pork trade is estimated at between five and six million dollars a year! From these items some idea may be formed of the amount of sales effected. The transactions are almost wholly for cash. Some firms doing a business of fifty to a hundred thousand dollars a year keep no books, but divide the net receipts each day, thus keeping everything "square."

Many interesting details might be given, did space permit, and we may recur to the subject again to give some practical hints to our country readers who bring or send produce to this market. The purpose of the present article is to call attention to this "Institution" as one of general interest, and a place to be visited by our subscribers who come to this city.

Plenty of Beef.

Owing to the increased railroad facilities, and also to the greater attention paid to stock-raising during the few years of moderate grain crops, the quantity of beef brought to this City during the present season has been unprecedently large. The live stock reports for a few years past show that the number of beeves sold in and around this city, averaged 3,143 per week in 1857; 3,676 in 1858, and 3,950 in 1859, while the average for the current year will reach about 4,400. During the two months ending November 1st, the receipts have been enormously large, amounting to 49,700 for nine weeks, or an average of 5,540 per week. Of this number 14,700 were from Illinois, 7,600 from New-York, 6,900 from Ohio, 3,800 from Kentucky, and the balance from other States. It has been difficult to sell so many cattle, even at the low rates which have prevailed of late.

Wolves in Maine.—It is reported that these ferocious animals are unusually abundant in Maine, the present season. In Aroostook Co., they have been very destructive of sheep, and in some instances have killed young cattle.

If an elephant can travel eight miles an hour and carry his trunk, how fast could he go if he had a porter to carry it for him.

Large Vegetable Garden.

Mr. Charles Backus, a Long Island farmer, has under cultivation eight large farms devoted to raising vegetables for New-York market. During the past year he has raised forty acres of potatoes, fifteen to twenty acres of parsneps, carrots and beets, fifty of corn, eighty of cabbages. One hundred acres are devoted to asparagus, and forty to currants. Three and a half acres are under glass, for raising early salad, radishes, cucumbers, etc. From three hundred to three hundred and fifty laborers are employed in the Summer season, and twelve large wagon loads of produce are every day sent to the City. His business in a single year amounts to $100,000. Only thirteen years ago two wagon loads per week were the whole amount of produce raised by Mr. B., who has every year since extended his operations, until they now probably exceed those of any market gardener in the Union.

The Prairie Roses.

"That's the Michigan rose, ain't it?" is a question put to us twenty times a year by visitors on seeing our collections of climbing roses. As if there were *only one* rose of this sort. Let us therefore explain a little. There are many running roses among the tender, ever-blooming varieties, as, for example, the Cloth of Gold, Lamarque, the Multifloras, Banksian, etc. In the Carolinas, we have seen these shedding their fragrance around the second and third story windows of houses. But of these we do not now purpose to speak.

There is a family of roses known as the Prairie-roses (botanically, *rosa rubifolia*,) which are hardy climbers, and adapted to every climate and soil. They were raised by Mr. Feast of Baltimore and Mr. Pierce of Washington, from seeds of the wild climbing rose of the western states, sometimes called "the prairie rose," and, in certain localities, "the Michigan rose." But it might as well be called the Ohio, or the Kentucky rose, as the Michigan. This original wild rose has single flowers. These gentlemen sowed seeds of this wild rose in their gardens, by the side of beds of Noisettes and other superior roses, where the pollen of the one would be carried to the blossoms of the other. Seeds of the wild roses so impregnated, were sown, and from them a great number of new varieties were originated. Out of this multitude, a dozen or more of the finest, with double flowers, have been selected, named, and sent into market. It is plain, therefore, that *the* prairie rose, or *the* Michigan rose is the original wild, single flowered plant of the West, and not the splendid, various-named and double-flowering progeny derived from its seed by hybridization. Of these last, we will give the names, and such brief descriptions as are at hand:

1. *Baltimore Belle.* Light blush, nearly white, double, flowering in clusters, and with the fragrance of a Tea rose.
2. *Queen of the Prairies.*—Larger than the preceeding, deep pink, very double, with occasionally a white stripe on the petals.
3. *Perpetual Pink.*—Pink, changing to purple, and flowering twice a year in strong soils.

The above are Mr. Feast's seedlings; the following are Mr. Pierce's:

1. *Pride of Washington.*—Quite dark pink, cupped in clusters of twenty or more.
2. *Anna Maria.*—Lighter pink, smaller, double, cupped.
3. *Eva Corinne.*—Delicate blush, carmine centre, fragrant.
4. *Mrs. Hovey.*—White, very double, larger flowers than any others. A superb plant.
5. *Jane.*—Lilac-rose, imbricated, double, in clusters.
6. *Linnæan Hill Beauty.*—Pale blush, beautifully tinted.

The others, which we have not seen, are as follows: Miss Grinnell, Ranunculiflora, Virginia Lass, President, Triumphant, Mrs. Pierce. These are all said to be quite desirable. There may be others still of which we have not heard. From the whole list, a fine collection may be made, for one's garden or veranda.

Covering Strawberries.

We can have too much of a good thing, as many tyros in fruit culture have found out to their cost in this operation. Reading that strawberries are benefitted by a mulch in Winter, they wrap them up as they would their babies in bed, hardly leaving a breathing hole. Three and four inches of stable manure, or leaves, are spread over them at this season, and the snows press down the litter, so that the leaves and crowns of the plants decay. They come out in the Spring black and dead.

Nature gives us a profitable hint as to the proper amount of protection for this plant. It grows among the grasses, and the old fog that forms after mowing, where the fields are not pastured, screens them sufficiently from the cold. If the leaves are covered at all, it should only be with loose litter through which the air can circulate freely. With this precaution, we have never found any difficulty in the winter-killing of the plants. It is better to manure them at this season, than in the Spring. What is spread upon the surface now, leaches down with the Winter rains, and is equally distributed among the roots. Look occasionally at the plants to see if the leaves are green.

John Chinaman's Floral Tastes.

In Mr. Fortune's "Three Years' Wanderings in China," one of the most readable books issued for many a day, we find the following show of Chinese taste in horticulture: "When traveling on the hills of Hong-Kong, a few days after my arrival in China, I met with a curious dwarf *Lycopodium*, which I carried to Mr. Dent's garden, where my other plants were at the time. "Hai-yah," said the old compadore, when he saw it, and was quite in raptures of delight. All the coolies and servants gathered round the basket to admire this little plant. I had not seen them evince so much gratification since I showed them the "Old Man Cactus" (*cereus senilis*) which I took out from England, and presented to a Chinese nurseryman at Canton. On asking them why they prized the Lycopodium so much, they replied, in Canton-English: "Oh, he too muchia handsome; he grow only a leetle, a leetle every year; and suppose he be a hundred year old, he only so high;"—holding up their hands an inch or two higher than the plant."

Such is the taste of "the celestials," who dwarf their ladies' feet, and dwarf their oaks and pines into pigmy-trees. We outside barbarians can't appreciate such tastes; our education is neglected.

To keep apples from rotting—place them in a dry cellar with a family of children.

Re-Grafting Pear Trees.

A correspondent, who does not succeed with the Duchess d'Angouleme pear, and whose Virgalieus crack badly, wishes to know what to do with his trees. Shall he cut them down and plant anew, or can he graft over his old trees?

If our friend's trees are on the quince-stock, we must express our surprise at his ill success with the Duchess, for that is considered everywhere one of the best sorts for dwarf trees. But if he is certain that he has treated this properly, and it still refuses to come to terms, then let him graft over the top with other varieties. And we would say the same of the Virgalieu; though if, as is often the case, the tree itself is diseased, we doubt if he will ever get healthy and handsome fruit from it. If his trees are all on the quince stock, he may re-graft them with any of the following sorts, viz.: Louise Bonne de Jersey, Vicar of Winkfield, Bartlett, Beurre d' Amanlis, Buffum or Belle Lucrative. If they are standards, he can make his own selection, though if he wants our judgment, let him choose from the following list: Madeleine, Rostiezer, Beurre d' Anjou, Bartlett, Belle Lucrative (one of the finest of all pears,) Seckel, Flemish Beauty, Urbaniste, Lawrence.

* * *

Pruning Dwarf Pear Trees.

Now that the labors of the farm and garden are partially suspended by the cold of Winter, we purpose to consider a few subjects which, though of little practical use the present month, will yet serve us well on the opening of Spring. And for to-day, we choose the management of the Dwarf Pear tree. Doubtless, the poor success which many persons have had in growing this fruit, has been owing partly to planting in wet and poor soils, to injudicious manuring, or bad tillage, or the selection of kinds unsuited to the quince stock; yet, not a little of the blame, we think, should be charged to bad pruning. Let us see if we can not learn something on this subject, and systematize our knowledge.

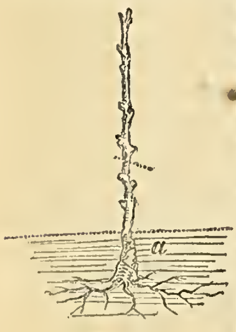


Fig. 1.

We will take a yearling tree, such as are annually sent from our nurseries by the thousand. The annexed cut, [Fig. 1.], will represent it. It is to be planted with the point of junction between the graft and stock (*a*) three inches below the surface of the ground. If it is vigorous in root and branch, we will cut it down to within 18 inches of the ground, as indicated at the dotted cross-line in Fig. 1, making the cut with an upward slant, and just above a strong bud. Any buds lower than one foot from the ground, should be rubbed off. The object of this management is to get a strong growth of lower branches, to form the base of the pyramid—a thing of the greatest importance. If this end be not gained at first, it can not be secured afterward. A tree well managed the first year, will look, in the Fall, somewhat like Fig. 2. If any branches next below the leading shoot at the top, push out stronger than the leader, (and they often will,) they must be nipped off by thumb and finger during Summer. This will throw the sap into the leader, and keep it always the most vigorous. Sometimes the leader shoots off at an angle from the tree, or lops down from excessive growth; in either case, it must be raised up and kept erect by a long stake; let it be tied carefully so as not to chafe the bark. In March, or early in April of the next year, prune the tree by shortening in all the branches, cutting the upper shoots most severely, and the lower less so, aiming always to preserve the pyramidal shape of the tree. It is the tendency of all fruit trees to throw the sap most forcibly into the topmost branches, producing a vigorous growth there, at the expense of the lower branches. But it is the design of art to reverse this, and to give a strong growth at the base. Hence, the pruning knife must bear hard upon the upper portions of the tree and lightly upon the lower. The proper pruning at this time may be indicated by the cross-lines in Fig. II. Cut back, on an average, half the growth of last year; at the top cut more than this, at the bottom less. In pruning the leader, it should be cut down to a strong bud on the opposite side to that of last year: this will tend to keep the central trunk perpendicular.

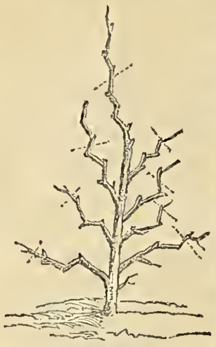


Fig. 2.

During the second Summer, follow substantially the process of last year. Give the lower branches plenty of room and light, rubbing off any weak, superfluous shoots which push out among them, pinching back any branches that grow more rampantly than others, keeping the leader erect and prominent above all the other branches. It should be the aim of the cultivator, this year and every year, to form one central trunk from which all the other branches shall radiate; not to allow his trees to grow up with several main branches like a currant bush. A well balanced Norway Spruce will suggest an ideal of the form in which a dwarf pear should be trained, except that the lower branches of the pear tree should not sweep the ground.

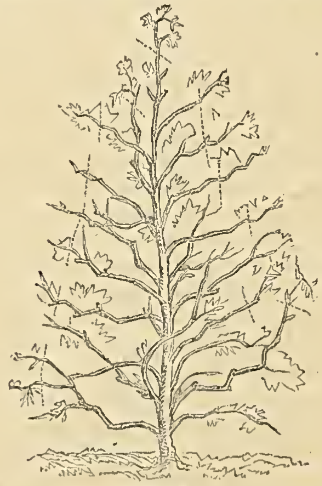
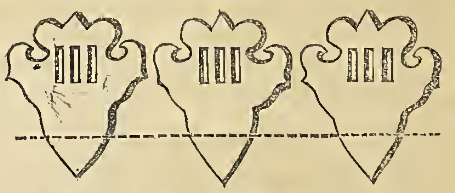


Fig. 3.

If at any time a gap occurs by accident among the limbs of the tree, it may be filled up by pruning the adjoining branches to a bud on the side towards the gap; young shoots will push out in that direction. If the lower tier of branches incline to grow too upright, prune them for a year or two to buds on the lower sides of their branches. Or, if they are too pendent, prune in the opposite way.

These directions will show, briefly, the general management of the tree at the annual Spring pruning. There is, however, another manipulation of great importance, during the Summer. Every one must have observed that, according to the prevailing mode of pruning only once a year, we are obliged annually to cut off and throw away the best of the new wood and buds. Can we not avoid this? Yes, in a measure. We can, during the growing season, check the strong flow of sap to the extremities of the branches, and thus distribute it along the wood and buds which are to be saved at the next pruning. For example; early in the month of August, go over the trees and bend down, and slightly bruise, or partly break off the ends of the branches just above where they will have to be cut off at the Winter pruning. Let them hang during the rest of the Summer, as shown just above the dotted cross-lines in Fig. 3, not broken enough to stop the flow of sap into them, but merely to check it. If the branches were broken off entirely, it would cause the buds below to start into premature growth. In the early Spring pruning, take off the entire branch at the points shown by the cross-lines, and you will have plump, healthy wood and buds left for next year's use.

* * *



New Bordering for Flower Beds.

The beauty of a flower bed is greatly increased by an appropriate edging, just as the effect of a jewel may be hightened by proper setting. There are objections to grass, box, or other plants, which, though not sufficient to cause them to be discarded, yet make some substitute desirable, particularly where the space is limited. In the *Agriculturist* (page 178 June No.) was described a new style of bordering made of tile, and much used in England. One of our subscribers, Mr. Thomas Eardly, Essex Co., N. J., who is engaged in the manufacture of drain tiles, has acted upon the hint there given, and is now manufacturing various patterns of this edging. A drawing of one of his samples is given above. It is made in separate pieces, as here represented, with the lower end pointed to be easily introduced into the soil. The dotted line shows the surface of the ground. It is made of various patterns, and any desired style can be got up by sending a drawing of the kind wanted. The color of the specimen sent us, is dark cream, but the clay can be mixed with different hues. The cost, we believe, is from 30 to 50 cents per yard, according to the finish. For a front yard, for small plots upon the lawn, and in many cases for the general garden, this style of edging will be found quite pleasing.

* * *

Novelties among Flowers—Green Roses—Double Zinnias.

The London Gardeners' Chronicle thus describes a novelty among roses, which has been successfully grown in France and in England: Conceive, a China Rose, with every part bright green, deep on the outside, pallid in the middle; the calyx wholly unchanged; the five natural petals transformed into five small, broad, green leaves, and all the rest of the center consisting of pale green straps of various degrees of narrowness, spreading evenly round the middle, and forming a green star with innumerable points. Such is the Rose Bengale verte. It has no scent, and does not show the least inclination to exchange its verdure for a rosy hue. It is quite regular in its form and greenness, no change having been remarked in it since the year of its birth. It is now a well established five-year-old plant, with a fixed habit.

Although this has no great beauty in itself, it is considered possible that by hybridizing, new varieties may be obtained, combining the parent colors, red, white and green, and thus new beauty be added to the Queen of flowers.

The Zinnia, after years of cultivation with very little success in changing it from its single habit, has at last rewarded the florist's care, by donning a full flowing suit equal to the Dahlia. Specimens have been produced by the Messrs. Vilmorin, of Paris, which measure from two to three inches in diameter and are as completely double as the Pompone Chrysanthemum. The colors are also variegated, purple, deep rose, light rose, rose striped, red, orange red, buff, and various shades of these colors, presenting hues of unrivaled brilliancy. These results of long continued painstaking are cheering to the florist, as indicating that the highest results of the art are not yet reached, and new and unexpected beauties may yet be developed in the floral world.

Window Gardening.

We could wish that more attention were given to this branch of horticulture. For what more pleasing sight than a good collection of plants in a living-room in Winter! We at once associate ideas of refinement, grace, delicacy of sentiment, and home attachment with the members of such a household. Of house-flowers, as well as of out-door flowers, it may be truly said "They refine and hold us; they not only elevate our sensibilities, but wind themselves about our heart-strings: they employ our daily thoughts—demand our daily care. They imply frailty, and we guard them; helplessness, and we assist them.......Who shall say that this culture, this care and labor, is not conducive to virtue?—is not virtue's self, transferable to humanity when the exigency claims it? And yet it is so beautiful, this voiceless commune with the flowers! The glossy leaves only tremble their gratitude, and the blooming roses blush their psalm of thanksgiving. And then, what silent preachers—how suggestive of brightness, that passes away; of patience, that waits and watches for the bloom; of diligence, that watereth when the shower is withheld, and the dew is gone; of sorrow, from the broken stem and withered leaf; of resignation, for they live yet at the root; of immortality, for

"Flowers bloom again; leaves glad once more the tree;
And man, there blooms a second Spring for thee."

But the poetry of our subject has led us away from its more practical aspects. It is not necessary to have a costly green-house or conservatory, in order to grow good plants. In many a kitchen window have we seen as handsome geraniums and roses, as under the costliest glass roof. All that is wanted, is to give them the requisite soil, light, heat, air and moisture—in short, to make their condition as nearly as possible like that of out-doors.

As to Soil.—It requires some experience to determine just what kind of soil each plant needs, their wants are so different. But we will give a few hints: All plants, unless it be aquatics, need drainage at the bottom of the pots, about one sixth the depth of the pot. This prevents the soil from becoming heavy and sour. Plants with slender branches, and roots of a fine, thready, fibrous texture like the heaths, require peaty earth. Those with branches and roots somewhat stronger, should have the same soil with a mixture of sand added. Almost all bulbous plants do best in light, rich, sandy loam. Shrubbery and herbaceous plants, such as the myrtle and jasmine, require a rich loam and leaf mold. Those with strong roots but slender heads, as Veronica, Maurandia, etc., need a sandy soil mixed with leaf mold and rotten manure. Orchideous plants want a soil composed of sandy loam and peat in equal parts; and they should have little or no water while not in a growing state. Succulent plants, as the Aloe and Cactus, do very well in stove-heated rooms, and require only a little water; for soil, a mixture of sandy loam and lime rubbish. Aquatic plants, as the Villarsia, require to be constantly wet; the saucer of the pot should always have water standing in it. A mixture of peat and loam is the soil for them.

As to Light.—As a general rule, plants can not have too much. But as all can not have the same amount at a given window, we may put those which are out of bloom and in a partly dormant state, the furthest from the window. A southern exposure is the best, and a northern the poorest. Turn the pots around every few days, in order to prevent their "drawing," and so as to make the plants round and bushy.

As to Air.—Give all you can without freezing them. Lower the window sash a few inches at the top, whenever the mercury rises out-of-doors to 40°. At other times, let in fresh air from adjoining rooms. Plants breathe, as well as people, and want good air.

As to Heat.—When our houses (our grandfathers', we mean,) were warmed by fire-places, there was no danger of over heating the air for the health of the family or of house-plants. But with our modern abominations (comforts, we call them,) of coal stoves and hot-air furnaces, there is constant liability to excess of heat. Nearly all plants that succeed in parlors, will fare better with a temperature of 45° to 60°, than in that of 65° to 80°, the range of heat in many dwellings.

As to Watering.—Much harm comes from the neglect or injudicious use of water. No one wants to see the soil in his pots drying up, and so water is thrown on, day after day, until the earth becomes sodden, and the roots of the plants decay. Of course, the opposite extreme should be avoided. Such plants as the Egyptian Lily, the Chinese chrysanthemum, the Fuchsia, the Ivys, etc., need a great deal of water, when in a growing state, but the majority of house-plants do not. Those which have passed out of a flowering state and are nearly dormant, require only just enough to keep them from wilting. To deluge a plant every few days, is like glutting the stomach with needless food and drink.

It is a good rule, to allow the soil always to have the appearance of dryness before watering, and then to water thoroughly, so thoroughly as to wet the entire mass of earth, and have the water run through into the saucer beneath. This water should then be emptied out. To find out whether a plant needs watering, examine the soil with a stick. Experienced gardeners examine it by rapping with their knuckles on the side of the pot: a light, hollow sound meaning a call for water. Of course, neither hot nor cold water should be used: let it be as near as possible to the temperature of the room.

It is well to use every means to keep the air of the room as moist as possible. Sprinkle the leaves frequently, and the shelves or table on which the pots stand, and the oil-cloth or mat beneath. Pans of sand covered with moss, set between the pots and often watered, help to the same result.

As to Cleanliness.—Frequent sprinkling will do much to prevent the accumulation of dust on the leaves. Where it does not fully answer, the leaves should be gently wiped with a wet sponge or soft cloth, always using tepid water. Insects may be kept down, by dosing them with a decoction of soap or tobacco, or by fumigating them with burning tobacco leaves. For a single plant, set a hand glass over it, and burn a few leaves of refuse tobacco underneath. For several, place the pots under a dry-goods box, and make a bonfire of tobacco leaves for the amusement of the aphides. Let it always be borne in mind that no healthy foliage nor handsome flowers need be expected so long as a plant is infested with insects.

As we have been requested to give a list of plants which succeed well in parlor windows, and flower early in the Winter, we annex the following, which can be found at any green-house: Abutilon striatum, orange colored; Acacia intermedia, yellow; Bouvardia triphylla, scarlet; Begonia incarnata, flesh-colored; Cactus epiphyllum truncatum, red and white; Camellia alba pleno, white; C. imbricata, crimson and white; C. Jeffersonii, rosy crimson; C. Sarah Frost, crimson; C. Feastii, white and rose; C. francofurtensis, crimson; C. Landrethi, rose; Daphne odorata, white; Epacris rosea, rose; Erica lactea, white; Geranium Tom Thumb, scarlet; Olea fragrans, white; Oxalis Bowii, rose; Plumbago capensis, pale blue; Primula sinensis, various sorts; Salvias, of sorts; Viburnum tinus, white; Viola neapolitana, lilac; Viola arbona odorata, dark blue. To these may be added several roses, such as Sanguinca, Aggripina, Pink Daily and White Daily, Mrs. Bozanquet, Hermosa, Bourbon Queen, Aimee Vibert, Louis Phillippe. Nor will the collection be complete without the common Rose Geranium, the Egyptian Lily, Dusty Miller Geranium, Ivy leaved Geranium, and Patridge-leaved Cactus.

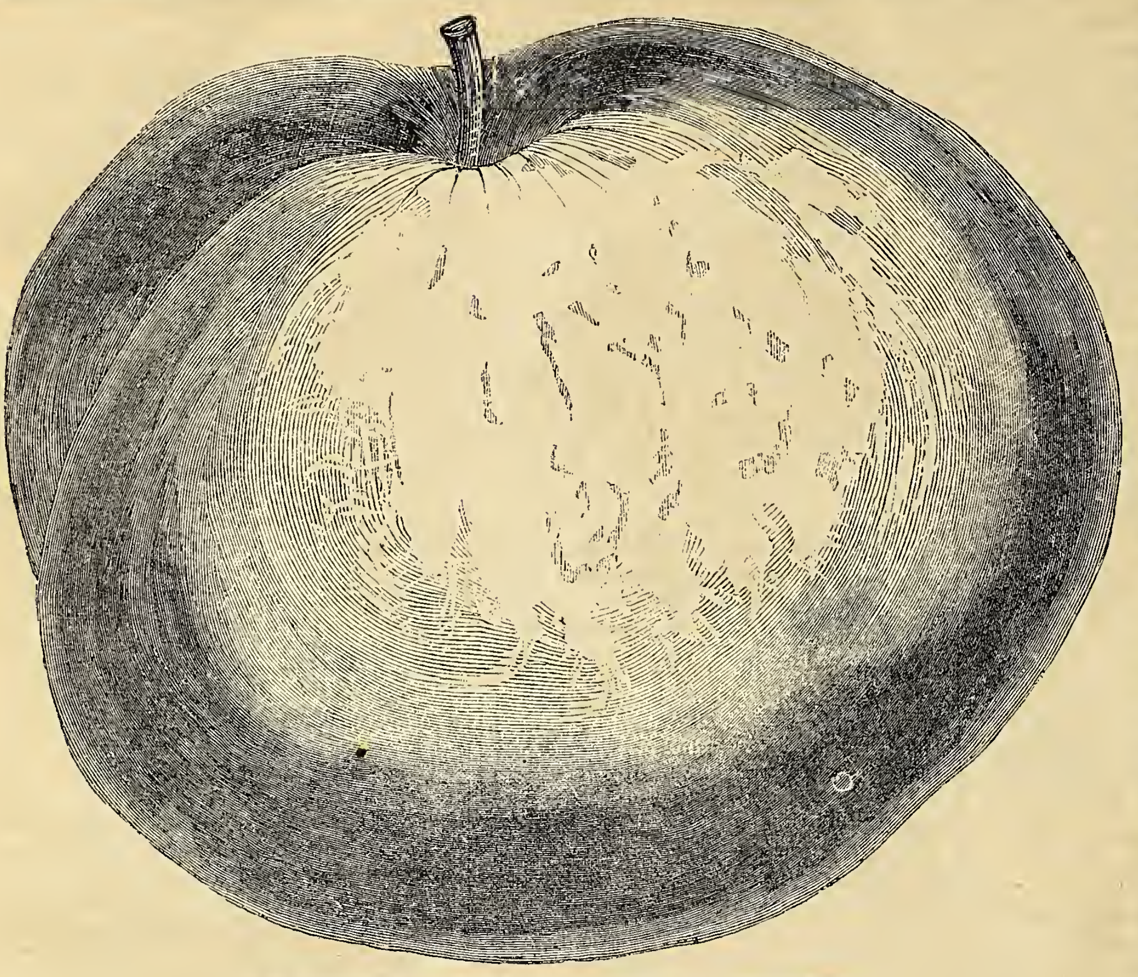
From the foregoing hints and list, our fair readers will be able to fill their windows with showy plants throughout the dreary Winter.

Fresh Parsley in Winter.

This can easily be obtained in the following way: Saw a good stout barrel in two, then make auger-holes of three fourths inch diameter and about five inches apart, all over the cask. Before Winter sets fairly in, dig up an abundance of plants from the garden, and, beginning at the bottom of the barrel, set the crown of a plant into each hole, covering the roots with good garden soil as you proceed with the planting. Go on thus, until the cask is filled, and then set a few plants on the top. Place the cask in a warm and light cellar, or under the staging of a green-house, and it will not only look well, but will furnish the table with many a savory garnish all Winter.

* * *

A mammoth horticultural building is to be erected at Kew Gardens, for Australian plants. It will be about the size of the Great Eastern.



MAMMOTH APPLE—GLORIA MUNDI—NATURAL SIZE.
(Engraved for the American Agriculturist.)

The above illustration represents the exact size and general appearance of a mammoth apple sent from Illinois to the N. Y. American Institute, by the President of the State Agricultural Society, and placed on the show table of the *Agriculturist* by the kindness of Mr. W. S. Carpenter. It measured 18 inches in circumference, and when first taken from the tree, weighed 3½ lbs. When received by us it was partially decayed, and the weight was reduced to two and one-fourth pounds. It was generally conceded by all who saw it, to be the largest specimen ever shown in this section—if larger ones have been exhibited we should be pleased to chronicle the fact. Perhaps in California, where the fruit trees yield so enormously that they seem to be actuated by rivalry, even this monster may have been outweighed.

The *Gloria Mundi* (Glory of the World), of which the above is a specimen is thus noticed by Downing. "Origin unknown. Tree vigorous. Not productive or profitable. Fruit very large, roundish, oblate, angular. Skin, greenish yellow. Flesh coarse, tender, with a pleasant acid flavor. Ripens from October to January."

Although it is gratifying to the amateur to be able to produce such extra large specimens, it is not, we think, to be regretted, that they are not common. It would add little to the value of apples, could they be made to grow as large as pumpkins—there would be greater loss from decay, more trouble in storing, and less convenience in using. An apple in the pocket or the dinner basket, is one of the pleasant reminiscences of childhood—such fruits as the above would be almost unmanageable by ordinary boys; then too, at what a risk should we walk in the orchard—a blow from the falling of such a meteor would be no light casualty!

The great improvement being made in the flavor of this standard fruit is a matter for far greater satisfaction than it would be to produce such monstrosities.

Keep House Plants Clean.

A writer in the London Cottage Gardener relates an experiment showing the advantage of keeping the leaves of plants free from dust. Two orange trees, weighing respectively eighteen ounces and twenty ounces, were allowed to vegetate without their leaves being cleaned for a year; and two others, weighing nineteen ounces and twenty and a half ounces, had their leaves sponged with tepid water once a week; the first two increased in weight less than half an ounce each, while of the two latter, one had increased two, and the other nearly three ounces. Except the cleansing, the plants were similarly treated.

For the American Agriculturist.

How to Take Care of the Baby.

I was very much pleased with Martha's sensible remarks in the Nov. No. on this subject. Being fully aware of its importance, and having had some experience, with your permission I will offer a few suggestions.

1st. Every mother who would keep her baby healthy, must see that it is properly clothed. I am not about to tell them, (as many writers on this subject do) to keep the little neck and arms covered, for this I know they will not do. I think the use of flannel of the first importance; not the gauzy stuff generally sold for infant's wear, but *real* flannel worn next to the skin, both Summer and Winter, till the child is at least two years old. Make the sleeves of the under garment snug, to protect the arm-pits, and accustom him to the out-door air. Thus protected, he will be free from colds, and many other diseases so fatal to infants.

2nd. In all ordinary cases, a mother may find time for her household duties, if she has not previously *taught her baby to cry*. This is too often done. The busy mother allows him to sit, till he is weary and out of patience, seldom going to his relief till the "squall" sets in fierce and strong. Then the mouth is stopped, and all is right. And he is no sensible baby who does not soon learn what effects follow certain causes. In order to break him of this habit, pursue the opposite course. When he *begins to get uneasy*, take him. Persevere in this, and you will work an effectual cure; then, he will soon learn to amuse himself for hours without a thought of crying.

3d. The baby is often made uncomfortable and cross by being overfed. Sometimes the mother wishes to rest a moment; of course, she must take the baby. Or, the mother has a very interesting book, and when she reads, she takes the baby *to save time*, and the child is allowed, or rather taught to nurse, whenever thus taken, and the little unfortunate's dinner hour comes so frequently that uneasiness producing ill-humor, or actual sickness is the result. Not that the mother should regulate this matter by the clock, only to allow sufficient time for digestion. By observing these hints, mothers will find that managing the baby much less difficult. ALICE.

Brick Tea.

"One half the world know not how the other half live," is an old adage verified every day. Modern travelers are continually bringing to light something new in the habits of other nations. A recent explorer on the Amoor River, in Siberia, thus describes what is called "Brick Tea:" "It is a solid mass about eleven inches long, six inches wide, and one and a half inches thick, and is made from the last gatherings and the refuse of the tea crops. The leaves and stalks are wet, mixed with bullock's blood and pressed in a mold. When wanted for use, pieces are chopped off with an ax, bruised between two stones, rubbed in the hands, and thrown into a cauldron. A bowl of sour cream, and a handful of millet meal with a little salt are added, and all is boiled for half an hour, and served up hot." It is said to answer a very good purpose for a man hungry enough not to be over-nice; but most persons would prefer to take their tea and soup separately.

Elementary Instructions in Plain and Fancy Work—Simple Knitting.....No. I.

BY MARIAN M. PULLAN.

[It is with pleasure that we introduce to the readers of the *Agriculturist* a lady whose writings on needlework have long been reckoned as standard. The thousands of ladies, particularly the younger ones, who read these pages, will be pleased to have the opportunity of profiting by the instructions of one who has had years of experience in devising and describing every kind of plain and fancy work. Many articles now only procurable in cities, and at high prices, can thus be made by their own hands, and pleasant, profitable employment be afforded for their leisure hours. We trust these articles will be found both pleasing and profitable.—ED.]

We commence with a description of plain knitting, by which those who have not been taught the art, can easily learn it. Many useful things besides stockings are made with this stitch, one of which is described in this article.

The implements are knitting needles—with cotton, wool, silk, twine, or any other material in long lengths. Of course, for warm articles, winter socks, gloves, scarfs, hoods, and such things, wool must be supplied: the softer, thicker, and less twisted, the better: but homespun will do for warmth as well as any other.

The knitting needles are made of wood, ivory, bone, or steel. Wooden ones, which are as good as ivory, can be made by the boys, who will, no doubt, be pleased to aid their sisters. They should be of equal thickness throughout, smooth, and not liable to splinter. The size of an ordinary pen-holder is a very useful one: a pair of needles of that thickness, about 16 to 18 inches long, smoothly pointed at one end, and with a knob at the other to keep the stitches from slipping off, would do nicely for almost any article made in Double Zephyr wool, or yarn of equal thickness.

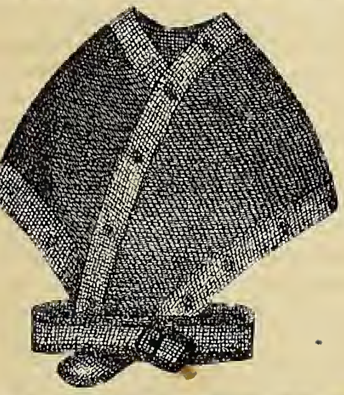


Fig. 1—New Pattern for a Sontag—front view.

Double Zephyr wool has eight threads in thickness: single Zephyr, half that number. This material is sometimes called single and double Berlin wool, because the best comes from Prussia, of which country Berlin is the capital city. If homespun wool, or worsted has to be used, it should either be as thick as double Berlin, or it must be wound and used double.

For single wool, needles should be about half the thickness named above. Sometimes long ones are required: but as these are awkward for small articles, it is better to have a pair about 9 inches and another about 18 inches long, both with knobs at the ends. Also a set of four thin ones, pointed at each end, is useful for such things as are to be knitted round. Steel ones can be had of this thickness; but those of wood are so much lighter they are much pleasanter to work with. To try if the needles of a pair are the same size, pierce a hole with one, in a stout card, and run the others through it. The least difference in thickness will then be observed. Common steel knitting needles often have very sharp, sudden points, which hurt the fore-finger of the left hand in knitting. These should be ground down, and gradually *tapered*, which will make them much pleasanter to work with.

The process of plain knitting.—To cast on.—This is done with two needles. Make a loop with your finger and thumb, near the end of the wool: slip it over the forefinger of the left hand, and holding a needle in the right hand, slip the point in the loop; pass the thread from the back, between the finger and loop, and to the front, and bend the needle, so as to bring this thread in a loop over the needle. Tighten the loop that was round the finger, and the first stitch is made.

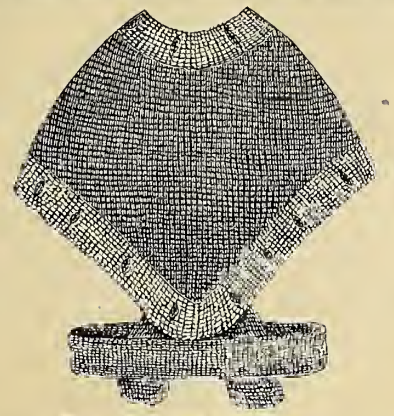


Fig. 2—Back view of the Sontag.

Take the other needle in the right hand, and the one with the stitch on, in the left. The right hand needle is held *lightly* between the finger and thumb, resting *over* hand between them. The wool twisted lightly around the little finger, passing under the third and middle fingers, and slanting *over* the nail of the forefinger, which is held close to the point of the needle. This needle rests against the thumb, which should not move while the row is in progress.

The left hand needle is held, on the contrary, *under* the hand, resting against all the fingers, and the outer edge. It is held between the middle finger and the thumb, and the forefinger is kept near the point, to slip the stitches up. It is the delicate touch of this finger which enables us to distinguish without examination, between one sort of stitch and another; and to learn to knit in the dark, or, at least, without trying the eyes. Do not push the needles too far through, in knitting. It is better to have the stitches as near the points as they safely can be, for the motion is then less, and the work proceeds more rapidly.

To continue the casting on.—The loop formed on the right hand needle, is slipped on the left hand *also*, that needle being brought forward (toward you) and inserted in it. It is then on both. Again bring the thread round the right hand needle, and make another. Let the left hand needle be put in that also, which makes *three:* and continue as before, until you have as many as you want. When the number of stitches are cast on, take the right hand needle, and insert it in every stitch successively, from the front, so that the point is behind that of the left hand, pass the wool round it, and bend it forward through the loop, making a new one of the thread just passed round. At the end of the row, when all the stitches have been transferred to the right hand needle, exchange the places of the two, and repeat.

To increase at the end of a row.—The last stitch being knitted, and the left hand needle withdrawn, insert it again, from the back, in the loop just knitted, and knit it over again, so that actually two stitches are knitted on one loop.

To take up the stitches at the edge.—Merely take up the loose loop at each line, between the ridges, and knit it as a stitch.

To make a stitch at the beginning of a row, do it as if casting on an extra stitch.

To cast off.—Knit two stitches, loosely. Draw the first over the second. Knit another. Draw it also over: continue so to the end, then cut off the thread a few inches from the work, and draw it through the last stitch.

To join two threads.—The only safe knot is made thus: Hold the two ends crossed, the new behind the old, between the finger and thumb of the left hand. Pass the thread from the ball round the first joint of the thumb, under the new end, and over the other, which bend back over it, under the loop, and holding the two ends in opposite directions, draw the loop tight. Then you may cut the ends short, and the more it is pulled the tighter it is.

THE SONTAG.

This is a sort of woolen habit-shirt, to be worn under the cloak, or in the house over the dress. It is a comfortable garment, and may be made *at home.* It is knit with the ordinary stitch in the following manner: Cast on five stitches. Knit backward and forward, increasing *one* at the end of every row, until 86 stitches are on the needle. This is the back.

Now knit only half, leaving the other 43 stitches on the needle. At the end of the row terminating in the needles, decrease by knitting two together, as one. At the end of the alternate rows make one, until you have done sixty rows. Cast off *loosely.* This is one front. Do the other the same. As you have no end to knit the thread on, in beginning the second half, just knit as usual, leaving an end of six inches, and next time you come there, knit the two threads together as one.

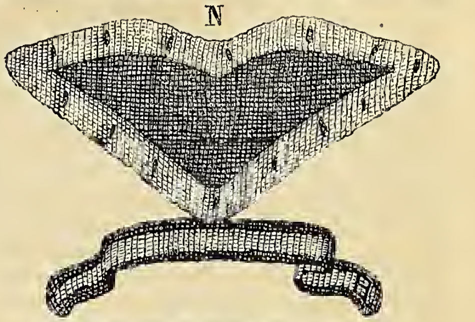


Fig. 3—The Sontag opened out—*n*, the neck.

The border, is prettier when made of a different color. Take up all the stitches along the two cast off ends and the neck, and knit in one row, increasing one at the end of every row, and also increasing one at each point of the neck in the alternate rows, by bringing the thread in front, and knitting the next stitch as usual. Do 12 rows, then cast off.

Take up the stitches along the outer edges, and knit the same, increasing one, in the alternate rows, each side of the 5 foundation, and also working six, at intervals, over the shoulders, and one at the end of every row. Do 12 rows, cast off loosely. Join the sloping ends; fasten off the ends. Work spots at intervals across the center of the border, with the same wool as the ground of the habit-shirt.

Put an elastic band at the back, to go round the waist, fastened with a hook and eye in front, crossing the ends over the chest. It makes a warm and not cumbrous wrapper under a mantle.

Molasses Candy.

Our experienced correspondent, J. Crozer, sends the following description of the way to make a good article, which will be welcome to all who have not yet lost their "sweet teeth:"

Candy can only be made from sugar; when molasses is boiled, the sugar it contains, is brought to a solid condition, and, of course, the more sugar there is in the molasses, the better the prospect of getting "candy." Much molasses, so called, is composed principally of water, colored with a little charcoal or carbon, the sugar is wanting, and you will not succeed in making candy from such an article, unless sugar be added to it. To make a "*prime article*," get molasses of a light color, rich in sugar, put it in a pan, and set it over the fire; confectioners use copper pans. The pan should not be more than half full, as it is very liable to boil over at first. To prevent this in some degree, add a little piece of butter—perhaps half the size of a hickory nut, whenever it boils near the top, and be ready to take it from the fire, if that should fail. When it fairly gets to boiling, there is not so much danger of its running over.

To ascertain when it is boiled enough, drop a little into cold water, and as soon as it has become cold, try it with the teeth. If it bites *tough*, it is not boiled enough, but if it cracks between the teeth, and seems very brittle, it is done. Then immediately take it from the fire, and pour it on something to cool, and you have molasses candy. In proportion as it is boiled to this degree, it will require more careful watching to prevent burning. Do not let it boil as rapidly, and try it oftener, until it *cracks* and *snaps* between the teeth or fingers. Sometimes a little saleratus is added to the candy to make it lighter, and more brittle. If it be used, have it finely pulverized, and as soon as the molasses is boiled enough, take it off the fire, sprinkle in the saleratus, stir it quickly for a moment, and pour it out. The color is improved by "working" the candy; that is, when it is cooled enough to handle, taking a lump, stretching it out and folding it together repeatedly, until it is sufficiently white. A little lard on the hands prevents sticking. Confectioners have a large hook over their table, over which the lump is thrown and pulled, and doubled and pulled again, until finished. No flour is added to whiten it, as some suppose; the light color is due to the thorough working.

Best mode of Drying Pumpkins and Squashes.

The common method of cutting into rings and drying on poles is far inferior to another plan which was partly described in a former volume of the *American Agriculturist*, and which we have practiced for several seasons past. The pumpkins, or squashes, are pared and cut in pieces and cooked thoroughly in as little water as will suffice to keep them from burning. After they are well done the water is mostly dried off with a gentle heat. The mass is then rubbed through a sieve or colander, and spread out on plates. It is soon dried before the fire, or in an oven kept at a very moderate warmth so as not to injure the flavor. The dried sheets peel off readily, and may be kept any length of time. When desired for use it is simply soaked in milk. It gives a good flavored pulp, and makes pies quite as rich as the fresh pumpkins or squashes.

A Christmas Pie.

Before plum pudding was invented, a mammoth pie for Christmas was considered indispensable in every English family. An old writer says of it, "It is a great nostrum; the composition of this pasty is a most learned mixture of neats' tongues, chicken, eggs, sugar, raisins, lemon and orange peel, various kinds of spicery, etc." Another writer mentions that the *chief* ingredient of the pie was always a *goose*. There is an account of an enormous Christmas pie made in 1770 for Sir Henry Grey. It contained two bushels of flour, twenty pounds of butter, four geese, two turkeys, two rabbits, four wild ducks, two woodcocks, six snipes, four partridges, two neats' tongues, two curlews, seven black-birds, and six pigeons! It was nine feet in circumference, and weighed about one hundred and sixty eight pounds. It was fitted upon a case set on wheels, so that it could be easily passed about the table to each guest.

A Good Cake.

To the Editor of the American Agriculturist:

We make a cake at our house, and when guests partake thereof they exclaim: "Oh! do let me have the recipe." Even gentlemen condescend to eat two or three at a sitting. For the *bonum* of the *publico* I will send the recipe to you. We call them Shrewsbury Cakes.

1 lb. of flour; 1 lb. of sugar; ½ lb. of butter; 3 eggs; 2 tablespoonfuls of powdered cinnamon. Mix together the butter and flour; then stir in the sugar and cinnamon; mix it all together into a paste with the eggs, then roll it out thin, cut it into *cookies* with a tumbler, and bake them in a quick oven. When nicely browned let the *publico* send samples of them to the *Agriculturist*, and my word for it, they will be highly approved of.

Aunt Sue.

For the American Agriculturist.

Cakes for the Holidays.

As the festive season will soon be here, when a supply of good cake is deemed indispensable by most housekeepers, I send for the *Agriculturist* a few new recipes which I have proved to be good in my own practice, and can therefore recommend them to the public. None of them are very expensive.

Welcome Cake.—Stir a cup and a half of sugar and half a cup of butter together, with three well beaten eggs. Sift a teaspoonful of cream of tartar, and half a teaspoonful of soda with three small cups of flour; this, with half a cup of milk must be mixed with the above, and baked in a moderately quick oven. By adding raisins and currants, ½ pound of each, a very good fruit cake may be made.

New Year's Cake.—1 cup of butter, 1 of sugar, 1 teaspoonful of cream tartar, ½ teaspoonful of soda, and caraway seeds to the taste. Flour must be added till the dough is fit to roll—these require a quick oven.

Spice Cakes.—1 cup of sugar, 1 cup molasses, ½ cup butter, a teaspoonful of spice, and one of soda dissolved in a little milk, add flour till it is quite stiff; then roll thin and cut in cakes. Bake quick.

Wealthy Cake.—Take ½ pound of butter, ¾ pound of sugar, the same of flour, 4 eggs, 2 lbs. of seeded raisins, 1 pound of currants, ¼ pound of citron, 1 gill of brandy. Spice well with nutmeg and ground cloves. Bake slowly three hours. This cake will keep six months. Icing for the cake. Beat the white of two eggs to a froth, then stir in half a pound of powdered sugar. Flavor with a little essence of lemon, and spread on with a knife when the cake is cold.

Alice.

Premium Bread.

The following directions for making bread were given by the ladies to whom premiums were awarded for the best samples shown at the Presque Isle (Me.) Agricultural Exhibition, Mrs. C. P. Bean, says: "I take one and a half cupfuls of new milk, and the same amount of boiling water, and add flour to this to make yeast, and let it set till it rises; then add flour until the dough is thick enough for baking. Then let it rise one half hour; then bake it."

Mrs. Sarah A. Emerson's method: "Take one pint of boiling water, one half teaspoonful of salt; when it is lukewarm, stir in flour until it becomes thick batter; set the dish in warm water in a warm place until the batter rises. Then mix with it one quart of sweet milk, or water; stir in flour until it forms a thick batter; set it in warm place until it rises; add flour until it is hard enough to knead; then let it set until it rises again, and bake it by a gradual fire until done."

For the American Agriculturist.

Bread without Yeast or Drugs.

Bread can be made light, wholesome, and palatable to the unperverted taste, without rotting by fermentation, or poisoning with Saleratus, Cream of Tartar, etc., in the following manner: Take cold water, the colder the better—ice water is the best—stir in *unsifted* wheat meal, enough to make a batter not very stiff; stir quickly while adding the meal, so as to introduce all the air possible. Put it in small patty pans (cake tins)—these are better than large dishes—and bake in a *hot* oven, hotter than for any other bread. Bake it half an hour or more. A little experience in making and baking will convince any one that bread can be made *light* without yeast or "lightening" of any kind, except air and water; and those who regard *good* bread as the staff of life, will ask no better. If any should not succeed the first time, *try again*, for it can be done. The baking is the most important part of the operation; the oven must be *hot*.

A Reader.

Good Jelly from Sour Apples.

Perhaps all the lady readers of the *American Agriculturist* are not aware that a very delicate and palatable jelly may be made from common sour apples, and it may be prepared at all seasons when you have apples on hand. To our taste it is preferable to any other. It is prepared thus: Pare the apples and stew them as you would for common sauce; then express the juice by straining the pulp through a flannel bag. To every pint of juice add from ¾ lb. to a pound of sugar, according to the tartness of the apples used. Let the juice boil before adding the sugar. (In making all jellies, this previous boiling facilitates the process.) The time of boiling is usually from 15 to 20 minutes, but this can be tested, and should be stopped before the jelly toughens. Put into molds, bowls or jars as may be most convenient, and cover with paper to exclude the air. A few quinces with the apples improve the flavor for most persons.

Fresh Apple Sauce all the Year.

Two methods, which we have practiced for several years with good success, may be new to some of the readers of the *American Agriculturist.* At any time during the Autumn or Winter, and especially when there are indications that our apples are beginning to decay, the less sound ones are carefully pared, cored, and all decaying spots removed. They are then thoroughly cooked and sweetened ready for the table. A part of the sauce is put boiling hot into bottles, and cooked and sealed just as described for putting up green fruits. (See page 214, July No.) This will keep well into Summer and even to a second year, and be always ready to be poured out for immediate use on the table, or in pies, etc. After filling all the bottles desired, another portion of the sauce is stewed as nearly dry as it can be without burning, and is then spread out thin on plates, and set near the stove or range, or into the oven when it is at a low temperature. The mass is dried down to a thin layer, which is put aside in a dry place. This "apple leather" always fills a good place at a time when green apples are scarce. To use it, put it into a little water to soak over night, and simply scald it before using. It thus preserves a fresh flavor, and furnishes an excellent apple sauce for all seasons. We much prefer this method for drying all apples for home use. A preparation like this is occasionally brought to market, and finds a ready sale. We should be glad to see it become a common article of merchandise.

Good Codfish Balls.

We are indebted to a lady reader of the *Agriculturist* for the following, which—as we have tested—makes a better fish ball than those commonly prepared. First get good fish—not half the codfish sold are cured right, and hence the general dislike to this really good and healthful article of food. Pick the fish into small pieces, soak in plenty of water until fresh enough for the table, and chop it very fine. Chop fine also a little pork, and fry it, and put the pork, and fat fried out, with the fish. Stir in one or more beaten eggs, according to the quantity of fish, and add about as much potato as there was of fish, previously mashing the potato fine. Make into balls, roll them well in flour, and drop them into hot fat; cook the same as doughnuts. The eggs improve the taste, and these together with the flour prevent the fish from being saturated with the frying fat, which, in the usual method, not only spoils the taste, but renders the balls indigestible.

Minced Veal—A Nice Relish.

While stopping with a friend in Connecticut, recently, we were treated to a dish that was certainly a good thing, and, as usual in such cases, we asked a description of its preparation for the lady readers of the *American Agriculturist.* It has since been tried "at home" with good satisfaction. Take, say 3½ lbs. of veal, and chop it fine. Add to it 3 well beaten eggs, 1½ tablespoonfuls of salt, 1 tablespoonful of good black pepper, 1 nutmeg grated, 4 small crackers rolled fine, three tablespoonfuls of cream or milk, and a piece of butter about the size of an egg. Stir well together, and make into the form of a loaf of bread. Bake it in the dripping pan for two hours, basting (dipping on the gravy) frequently. Those opposed to spices, may omit a part of the pepper and nutmeg, though for a relish, the quantity recommended is not too large.—*Query*—Could not beef and mutton be prepared in the same way. The veal preparation is certainly first-rate.

"SPICED HASH."

The above query was hardly needed, for the very next item we take from the "Ladies' Contribution Drawer," at the *Agriculturist* office, is the following from a New-Jersey lady: Take the remnants of cold steak or any other kind of roasted or boiled meats; hash them fine, and mix with potatoes well mashed, and add one or two beaten eggs. Season to your liking, with salt, pepper, nutmeg or mace, and cloves. Make into a loaf, and bake it brown. It is good, eaten hot or cold.

BOYS & GIRLS' COLUMNS.

The Editor with his Young Readers.

DON'T CHEAT YOURSELF.

A dishonest man once sent his son to make a purchase, and among other pieces of money he gave him a twenty cent piece, which looked much like a quarter of a dollar, and told him to be sure and pass it off; meaning that he should cheat some one by getting twenty-five cents for it. Presently the boy returned in great glee. "I got rid of it, father," said he, "I slipped it in between two pennies, and the man never knew the difference!"—He had passed it for a penny, thus cheating himself. Silly boy, was he not? But boys cheat themselves worse than this sometimes, when they least suspect it. John takes every opportunity to slight his lessons, and makes up excuses to satisfy his teacher. He often boasts to his companions how nicely he cheats his teacher; but it is himself who suffers the loss, and bye and bye he will find it out. James puts a cigar in his mouth, struts down the street, talks saucily to his parents, and cheats himself into the idea that he is quite smart, almost a man: he cheats himself out of the love of his friends, the respect of his companions, and is fast losing a good character. In many other ways, too numerous to describe, boys, and men too, cheat themselves.

The late Mr. Amos Lawrence, of Massachusetts, who had risen from poverty to wealth and high standing, by his industry and integrity, wrote the following excellent letter to his son, twelve years of age, in which you will see how important he considered the habit of being truthful and honest with one's self. He says:

MY DEAR SON.—I give you this little book, that you may write in it how much money you receive, and how you use it. It is of much importance in forming your early character, to have correct habits, and a strict regard to truth in all you do. For this purpose I advise you never to cheat yourself by making a false entry in this book. If you spend money for an object you would not willingly have known, you will be more likely to avoid doing the same thing again, if you call it by its right name here, remembering always that there is *One* who can not be deceived, and that He requires his children to render an account of all their doings at last. I pray God so to guide and direct you, that when your stewardship here is ended, he may say to you that the talents entrusted to, you have been faithfully employed. Your affectionate father, A. L.

A SAFE PROPERTY.

When the city of Megara was conquered and plundered by the soldiers under Demetrius, he was anxious to protect the philosopher Stilpo. So sending for him, Demetrius inquired what property he had lost in the confusion. "Nothing," replied Stilpo, "all my possessions are still safe in my head." That, after all, is the *safest* property, which one can carry with him at all times. Let the boys and girls of the *Agriculturist Family* all get as much of this substantial wealth as possible.

TOO SHARP FOR HIM.

Prof. Johnston of Middletown University was one day lecturing before the students, on Mineralogy. He had before him quite a number of specimens of various sorts to illustrate the subject. A roguish student, for sport, slily slipped a piece of brick among the stones. The Professor was taking up the stones one after the other, and naming them. "This," said he, "is a piece of granite; this is a piece of feldspar," etc.—presently he came to the brick-bat. Without betraying any surprise, or even changing his tone of voice, "This," said he, holding it up, "is a piece of impudence!" There was a shout of laughter, and the student concluded he had made little by that trick.

WHO CAN SPELL THIS?—A USEFUL PUZZLE.

Here is a capital thing with which to puzzle your friends, young and old, and at the same time give them a first-rate lesson in spelling. Get one or more persons to take a pencil and paper, and write the following sentence, as you slowly read it:

Preferring the Cornelian hues, and separating the innuendoes, I will merely state, that a peddler's pony ate a potato out of a cobbler's wagon, gauged by a sibyl.

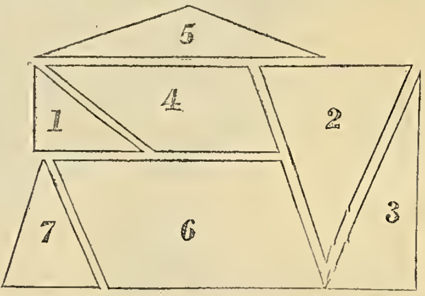
We read it off to a large company the other evening, including many well educated persons, of whom three were school teachers, but not one of them wrote all the words correctly. One wrote it thus:

Prefering the *Cornellian* hues, and *sepcrating* the *inuendoes*, I will merely *State* that a *pedlar's poncy eat* a *pototoe* out of a *cobler's waggon gagued* by a *sybil.*

This includes thirteen wrongly written words. The puzzle will be apt to fix the correct spelling of these words at least.

NEW PROBLEMS.

No. 30. *Figure Puzzle*—Arrange these seven pieces in the form of an exact square. Do not cut the *Agriculturist*, but copy the figures separately, and then put them together.



No. 31. *Enigmatical Story* by Aunt Sue.—Find out what *letter* each number represents, and write out the story with the words in place of the figures.

Two boys, one named 25, 13, 24, 19, 17, 15, and the other 6, 20, 21, 7, 8, 27, went to 27, 14, 17, their uncle 7 —— one 15, 4, 13, 6, 14, 19. He had 6, 15, 21 fine 20, 21, 3, 5, 14, 9, but he forbade the 22, 8, 12, 27 to 19, 4, 24, 17, without his 1, 21, 13, 9, 14, 11, 6. Now master 6. was a 1, 8, 3, 14, 22, 17, 5, 5 and 15, 4, 22, 24 boy, but his brother 25. was obedient to his uncle's 15, 4, 27, 2, 14, 9. One 12, 10, 16, master 6. said to his brother, "Let's 27, 8, 12, 12, 22, 14 the 20, 21, 19, 9, 17, 27, for we have a fine, 1, 2, 10, 11, 1, 17. Uncle has gone to 6, 21, 15, 13." "11, 21, indeed," answered 7, 25, 27, 6, 14, 19, 25, "20 21, 15 can you 12, 21, what you 9, 18, 26? Has not uncle forbidden us to 19, 23, 12, 17 them? But master 6. did not, 10, 6, 6, 14, 13, 24 to what his brother said. He took, 21, 13, 17 of the 20, 21, 3, 5, 14, 27 and 19, 21, 24, 14—2, 23, 7, but was 6, 2, 3, 21, 15, 11 and severely hurt, and having disregarded his uncle's 1, 21, 7, 7, 8, 11, 24, 27, he 22, 21, 9, 6 his good opinion and 22, 10, 26—23, 22, 22 for 6, 2, 19, 14, 14 weeks, and during the 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27.

ANSWERS TO PROBLEMS.

No. 29. *Illustrated Rebus.* (See cut in November No.) Furs-tea bee shoer'ewer rye-t t-hen go ahead; or, First be sure you're right, then go ahead.

Correct answers received to Nov. 12th, as follows:

Wm. G. Kieffer, 27; Levi Capp, 28; G. M. Englis, 24, 28; Rena V. Tibbals, 24, 27; Luther S. Tibbals, 28; Cale W. Waterman, 28; Emory Mills and Hudson Mills, 24, 27, 28 (The rebus is rather too difficult for our columns); H. H. Witmer, 28; "Farmer's Boy," 28; "Jerusalem Mills," 24, 27; (There was no signature to you letter.) H. W. Knight, 28; Otway B McCluire, 24, 25, 26, 27, 28; Seth F. Lane, 28; W. Harrison Lane, 28; F. A. Sanders, 28; Saidee and Katie A, 27, 28; Thomas Young, 28; Wm. H. Ranlett, jr., 29; Wm. Lee Raymond, 28; Thomas S. Peck, 28; Kate Andrews, 28, 29; Joseph Denay, 29; A. N. Crowder, 24, 27, 28, 29 (Your previous note was not received); D. E. Wager, 29; Henry Russel Westcott, 29; Elroy M. Avery, 29; Wm. H. Bliss, 29; Ellen A. Pond, 29; Haller H. Bayley, 29; Chas. P. Augur, 29; Thos. D. Smedley, 29; Chs. L. Siewers, 29.

GATHERING CHRISTMAS GREENS.

ABOUT CHRISTMAS—PRESENTS—EVERGREENS.

Christmas day will soon be here. Our own little folks at home are already thinking and talking about it, and thousands of you who read these lines are anticipating the merry times expected. Stockings hung up in the chimney corner, presents of skates and toys, dolls, and new dresses, candies and cakes, and other things too numerous to mention, are filling the thoughts and exciting the hopes of those who live where this festival is observed. Except in the large cities and villages, Christmas is not so generally celebrated in this country as in Europe. There, in most places, it is counted the great festival of the year, and is observed with much ceremony and general rejoicing. Among other pleasing features, is the custom of adorning the churches and private dwellings with evergreens, which is said to have originated in England. It has also been adopted in other countries, and is becoming quite general here.

The picture above represents two little chubby English children, rosy with health, eyes sparkling, and hearts light with happiness, trudging through the snow, with their aprons full of holly, laurel, ivy, and mistletoe, which they have been gathering to dress their cottage. We can imagine how proud they feel with their treasures, and with what satisfaction they will see them when arranged in the parlor, making it look like a fairy bower. They will have a merry Christmas without doubt, for their parents will be quite sure to reward them for such pains-taking.

You all know why Christmas is kept up. Can you tell the reason for giving presents at that time? It is found in the 2d Chapter of Matthew: read the whole account of the birth of Christ and you will discover one reason why presents are made, in commemorating the event.

But why adorn the buildings with evergreens? In old times, in England, there lived a people called Druids. They were the priests of that country, and taught the people to worship imaginary spirits who lived in groves and woods. Evergreens were taken into the houses at this season, that the spirits might come in and find shelter from the cold among their branches. When the people learned the Christian religion, this custom was still kept up, until it became a part of the ceremony observed in celebrating Christmas. The evergreens give a very cheerful appearance to a room, and although the spirits which the Druids believed in, do not come in, yet pleasant thoughts and happy feelings are excited, and thus *good spirits* take possession of the heart. The "Greens" also remind us of the coming Spring, and are quite appropriate to an occasion when we remember the coming of Him, whose work it was and is, to make all hearts happy, to bring Spring into every soul. We trust you may all share in the benefits He freely gives to all who desire them; then you will have a Merry Christmas and a Happy New-Year, and peace and happiness will be your constant guests.

"DOWN IN THE MOUTH."

Some years since a large whale was caught near the Thames River, in England, and taken to the shore, where it was visited by thousands. Its huge mouth was propped open by poles, and formed a cavern large enough for a good sized man to enter very easily. A scientific gentleman, quite eager to examine the interior of this cavern, stepped inside, and upon the animal's tongue. This is a spongy mass, and in this case having been some time exposed to the air, it was as soft as a bog, and as he stepped upon it he sunk, and slipping at the same time, he pitched forward headlong toward the whale's gullet. He was now in a really dangerous predicament; he sank lower and lower into the oily mass, until he nearly disappeared, and must soon have lost his life, had not the bystanders come to his assistance; as it was they had great difficulty in drawing him out of the fish with a boat hook.

Uncle John's Study.

BELIEVING ONE'S EYES—CURIOUS EXPERIMENT.

By Raleigh Truman.

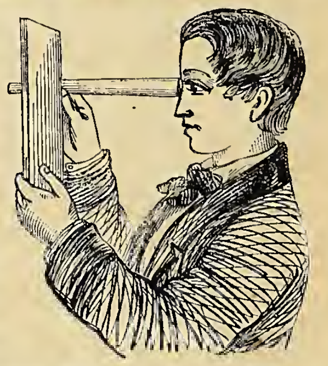
MR. EDITOR.—I have been so much interested by your talks with the boys and girls, and the pleasant stories related by the correspondents of the *Agriculturist*, that I want to do something to pay for it. I have thought of no more acceptable way than to send you occasional reports of the doings in Uncle John's Study. He is a bachelor, and one of the kindest and most *lovable* men in the world. Having no children of his own, he seems to think it his special business, to do all he can for other people's little ones. He has traveled all over the world, and seems to know almost every thing. He has a large room up stairs at my father's, which he calls his Study, where he spends most of his time; for he says he is like a honey bee—he has been gathering materials many years, and now he is busy making honey.—I suppose he means that he is thinking over what he has seen and heard, putting it in shape for his own satisfaction, and to please his little friends; we like his talks, as well as we like honey.

Not long since we were sitting around him, telling stories, when my brother Fred said, he once saw a man fill a bed with feathers, which he took out of a common sized hat. "How many times did he fill the hat?" we all inquired. "Not once," replied he, "he held his hat in his hand all the time, and kept taking feathers out of it, until the bed was filled." "That's a likely story," said I. "I'm sure it's so," answered Fred warmly, "for I saw it with my own eyes." Then Uncle John laughed pleasantly, and said: "Fred, call Ponto"—that is the name of our favorite dog. Ponto heard Fred's whistle, and came bounding in. Meantime, Uncle John had taken down a large looking-glass, and set it on the floor. "Here, Ponto," said he, pointing to the glass. The dog trotted up to it, saw his image, sprang back, then towards it again, giving a loud bark, and then put his nose to the glass to scrape acquaintance with his new companion. Presently, finding the glass kept him back, he darted around behind it, and we all shouted with laughter to see his astonishment at not finding a playfellow. Back he came again, to make sure he was there, and then round and round he ran, whining and barking in the most ridiculous manner.

"There, Fred," said Uncle John, "if Ponto could talk, would he not say, 'I'm sure there's another dog here, for I see him with my own eyes?'" Fred said nothing, but looked almost as much puzzled, as Ponto had a moment before; he had never thought one's own eyes could not be trusted.

"But he's only a dog," suggested little Susie. "Yes," said Uncle John, "but Raleigh and Fred both remember that a few years ago they held you up to the glass, and you tried to find the baby behind it. And so," continued he, "it is with us all. The eyes do not in all cases show us the exact truth; to be certain that they report correctly, we must use other senses. You do not believe your eyes when they tell you that objects on a picture stand one behind the other; you have handled pictures, and know they are on flat surfaces; the sense of touch has corrected the impression made by the sense of sight. When you whirl a bit of fire around rapidly, you see a ring of fire, but experience tells you, no ring is there, it only *looks* so. When two or more senses agree in their reports, we may feel quite sure of their correctness. Sometimes each eye will tell a story of its own, as when in squinting, two objects appear when there is really but one.

Here is a curious experiment showing how the eyes may have their impressions so mixed up, that you can't tell which to depend upon, without appealing to the sense of touch. Take a sheet of paper, roll it up into a tube, with one end just large enough to fit around the eye, and the other end rather smaller. Hold it between the thumb and finger of the right hand close against the right eye, and with the other hand hold a book or other object against the side of the tube." (The picture shows how to do it.) "Oh! there's a hole right through the book, and I can see things through it on the other side," exclaimed Fred. "That is, it looks so," continued he, remembering what Uncle John had just told us. We all tried it, and varied the experiment by holding the hand instead of a book against the side of the tube, and there appeared to be a hole through the flesh. "The right eye sees the hole through the tube, and the left eye sees the book, and the two appearances are so confounded together, that the mind can not separate them," said Uncle John.



"Now I know how to look through a mill stone," said Fred laughing. "Yes, keep both your eyes open," replied Uncle John.

"But how did the man get all the feathers out of the hat?" asked Susie. Just then a man called to see Uncle John, and we must wait until our next gathering in the study, before we get his answer.

[*To be continued.*]

Good News!

Sewing Machines Cheaper!

It is with the greatest pleasure we announce that hereafter the best Sewing Machines will be sold at a lower price. We believe in Sewing Machines and have been hoping that the time would come when they would be simplified and cheapened so that every family in the land could own one. What a world of toilsome "stitch, stitch, stitching!" it would save; how much it would contribute to life and health. That time is not yet at hand, we fear, but we are glad to note even the slightest reduction in price. We are to-day (Nov. 15), informed by the Wheeler & Wilson company, that from this date they will attach the Hemmer to *every* machine, and those hitherto sold at $50 without the hemmer will, from this date, be sold *with the hemmer* for $45, which is $10 less than the former price, as $5 extra was charged for the hemmer. We are thankful in behalf of the ladies, yes, and in behalf of their families, that even this reduction in price is made. In our premium list hereafter we offer the same machine with a *Hemmer*, for a less number of names, than was before required without the hemmer. (See premium **A.**)

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Seeds for Free Distribution in 1861.

[☞ SEE REMARKS ON PAGE 376.]

Each subscriber for the twentieth volume of the American Agriculturist (1861) *is invited to select four or five parcels of seeds from the list given opposite—provided the following conditions be noted and complied with.*

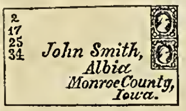
A. It is of absolute importance that the following directions be *strictly* followed, even to the minutest particulars. We have 77 distinct varieties of seeds, to be distributed among 100,000 or more persons scattered all over the country, which at the best will involve immense labor, and occasional mistakes must unavoidably occur, unless each subscriber take special pains to facilitate the work.

B. The seeds can be called for at the office, (after Feb. 20.) or be sent by express, or in ready prepared envelopes furnished by the subscribers, as described (E.) below.

C. Subscribers at different points can estimate whether they can receive their seeds cheapest by Mail to separate individuals, or in a package to the whole Club by Express.

D. If to go by Express, no envelopes will be needed. In that case simply send us a written list of the names, marking against each name the kinds of seed desired, *using the numbers in the Catalogue.* Keep a copy of the list sent, and give particular directions *on each list,* how the package is to be forwarded, and to whom directed.

E. If to go by *mail,* the applicant will (of course) furnish *prepaid* envelopes, of ordinary size, which should be prepared as in the engraving here given—that is: Put the figures corresponding to the Catalogue plainly on the upper left hand of the envelop, and put all the postage stamps upon the right side of the envelop,—one above the other, when two or more are needed, as shown in this pattern. Arranging the stamps thus, will prevent the seeds being crushed in the stamping process in the Post-Office. One ordinary envelop will generally hold the amount of seed-packages carried by two or three stamps. ☞ *The amount of stamps can be calculated from the Catalogue. Single 1-cent stamps on letters are of no value, unless there be even threes of them, as letter postage is rated by the half ounce.*



F. Let all letters referring to seeds be as brief as possible, and yet plain. All such communications are referred directly to the clerk superintending that department. It is especially desirabe that whatever relates to seed should be on a slip of paper, separate from subscriptions and other matter. (We shall probably distribute over *five hundred thousand packages,* and a minute's time saved on each of these would amount to 833 working days—or nearly three years!

G. Canada subscribers will need to substitute U. S. 10-cent stamps (or money) in all cases where 3-cent stamps are named in the catalogue. When several persons send together, it will usually be cheaper to receive seeds by Express (Postage is not necessarily prepaid *here,* on Canada letters.)

H. Always put the stamps *upon* the envelopes, and not drop them loosely into the enclosing letter.

I. It is always better to send envelopes of the ordinary size, and made after what is called the "Government pattern,"—that is, those in which the back comes under the piece lapping over; these seal up more firmly. This point is not essential, however.

J. Usually, the *lighter* the envelop the better, that more seeds may go under the same stamps.

K. Send only the number of stamps required for postage on the seed.

L. Those forwarding *unpaid* envelopes, will, of course, not be disappointed if they do not return. We offer seeds *free,* but can not, in addition, afford to pay postage also.

M. All seeds sent by mail are put up at our country residence, and each package is there mailed *direct,* to avoid its being overhauled at the Distributing offices.

N. ☞ We shall take time to mail all the seeds carefully and regularly. This will occupy the entire months of January, February, and March. Those going to distant points, and where the seasons are earliest, will be mailed first.

Seeds to California, Oregon and Washington Territory.—The same regulations apply here as in the eastern states. The postage will be only 3 cents per half ounce, as we shall send all such envelopes to be filled by a friend in California to whom all the seeds will be forwarded by express, in bulk, in sealed tin cases, thus ensuring them safer carriage over the Isthmus, and saving postage to the recipients.

PARTIAL LIST OF SEEDS.

[Descriptive Notes upon these seeds will be given in the first numbers of next volume. The figures denote the order in which the seeds have been added to our Free Seed Catalogue. These numbers are upon all packages, seed drawers, etc., and are used in place of the names of the seeds.]

Field Seeds.

140—Imported Giant Wheat requires ½ of a 3-cent stamp. for postage on each package.
2—Improved King Philip Corn—Single, double, or triple packages, as desired, requiring one, two, or three stamps.
3—Stowell's Sweet Corn..........Same packages as No. 2.
141—Darling's Early Sweet Corn....Same packages as No. 2.
142—Yellow Stone Turnip..............½ of a 3-cent stamp.
143—Waite's Eclipse Turnip,............½ of a 3-cent stamp.
98—Long Red Mangel Wurzel............One 3-cent stamp.
101—Improved Long Orange Carrot.....½ of a 3-cent stamp.

Vegetable or Garden Seeds.

8—Daniel O'Rourke Pea..........Packages same as No. 2.
9—Champion of England Pea.............do. do.
58—Napoleon Pea..........................do. do.
130—Great Eastern Pea.....................One 3-cent stamp.
12—Green Kohl Rabi........... .One-third of a 3-cent stamp.
13—Enfield Market Cabbage...............do. do.
145—Flat Dutch (Winter) Cabbage.........do. do.
146—Early Battersea Cabbage..............do. do.
147—Neapolitan Cabbage Lettuce..........do. do.
148—Long dark Blood Beet..................do. do.
149—Extra early Bassano Beet.............do. do.
74—Solid White Celery......................do. do.
150—Early Paris Cauliflower................do. do.
151—Yellow Danvers Onion..................do. do.
95—True Hubbard Squash...................do. do.
152—Fine large Cheese Pumpkin...........do. do.
153—Large Red Tomato.......................do. do.
154—Ice-cream Water Melon.................do. do.
76—Skillman's Netted Musk Melon........do. do.
103—Sage..do. do.
155—Long Cayenne Pepper.................do. do.
156—Summer Savory..........................do. do.
157—Long Prickly Cucumber...............do. do.
17—Red Strap-Leaf Turnip......One half of a 3-cent stamp.
74—Long White French Turnip..........One 3-cent stamp.
107—Giant Asparagus..........................do. do.

Flower, Fruit, and Ornamental Seeds.

89—Cotton Plant (2 kinds).................one 3-cent stamp.
111—Castor Oil Bean (Ornamental)......½ of a 3-cent stamp.

On an average about five of the following varieties will go under a 3-cent stamp.

160—Raspberry Seed ....(for Experiments.)
161—Currant Seed...........................do. do.
162—Gooseberry Seed.......................do. do.
163—Strawberry Seed.......................do. do.

23—Mignonette, (*a.*)
25—Mixed Nasturtium, (*a.*)
27—Extra Cockscomb, (*a.*)
29—Double Balsams mix'd (*a*)
30—Tassel Flower, (*a.*)
31—Chinese Pink, (*a.*)
32—Portulaccas, mixed, (*a.*)
33—Cypress Vine, (*a.*)
42—Foxglove, (*b.*)
49—Candytuft, (*a*)
41—Phlox Drummondii, (*a.*)
86—Euphorbia, mixed, (*a.*)
87—Coreopsis, (*a.*)
122—Mixed Canterbury Bells, (*b*)
123—Gilia nivalis, (*a.*)
124—Whitlavia, (*a.*)
126—Long-tubed Centranthus, (*a.*)
164—Sweet scented Ageratum, (*a.*)
165—Cobœa Scandens, (*p.*)
166—Lobelia gracilis, (*a.*)
167—Malope Grandiflora, (*a.*)
168—Swan River Daisy, (*a.*)
169—Clarkia pulchella, (*a.*)
170—Evening primrose, (*b.*)
171—Forget me not, (*p.*)
172—Lunaria bienuis, (*b.*)
173—Mixed branching Larkspur, (*a.*)
174—Mixed Pansy, (*p.*)
175—Mixed Salpiglossis (*a.*)
176—Tom Thumb Nasturtium, (*a.*)
177—Ornamental Grass, (*a.*)
178—Lathyrus latifolius, (*p.*)
179—Xeranthemum annum, (*a.*)
180—Centaurea Americana (*a*)
181—Jacob's Ladder, (*p.*)
182—Sweet Alyssum, (*a.*)
183—Mixed French and German Asters, (*a.*)

a, annual—*b,* bienuial—*p,* perennial.

PREMIUMS FOR 1861.

Vol. XX.

[☞ SEE REMARKS ON PAGE 376.]

After close figuring, and liberal terms from manufacturers, we find we can fully keep up the character of our paper, and even *improve* it, and yet offer the large premiums named below. These articles are offered as direct pay for time spent in canvassing for names. *This year we make no distinction between new and old subscribers,* though it is supposed that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ In selecting articles for premiums, we have aimed to get such as are *useful* and as have been most frequently called for by our readers. ☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing *for competition.* Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he or she, is working for; and also that if a higher premium is not secured, a lower one can be taken.

☞ The work of collecting names can begin *now* with special advantage. See "Baker's Dozen," page 376.

☞ Any extra specimen copies, or show bills, needed by canvassers, will be freely furnished. We have now a good show bill for 1861.

☞ Only one premium can be paid on the same subscriber

☞ Every person collecting names for premiums, can send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent, one of them marked at the top, "For premiums," also with the name of the sender. These duplicate lists will be kept on file by themselves, to be referred to in making up the premium when any person has completed sending in names for Volume XX.

☞ The premiums are offered for subscribers for Volume XX (1861), whenever received. Canvassers will have time for completing their lists, but the premium will be paid as soon as any list is made up—if duplicate lists are sent, to refer to at once.

☞ Clubs need not be confined to one Post Office.

☞ No premium is sent till *specifically asked for,* as we have many friends who send in large lists but will take no premium, and we are not certain that premiums are desired, unless the fact be mentioned particularly.

☞ It is believed that all can recommend this journal to their friends and neighbors, and urge them to take and read it. It will continue to be independent, out-spoken, and reliable, the special friend, advocate, and promoter of the farmer's interest, and will aim to facilitate and lighten the labors of every household. A larger number of instructive as well as pleasing engravings, and a greater amount of really useful information, will be given in the next volume, than in any preceding one. *Onward, upward,* is our motto.

☞ Premiums **A,** to **J,** are offered for subscribers at the lowest club price (80c.), or at the regular price ($1). Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

Premium A.

130 Subscribers at 80 cents each, (or **90** at $1 each,) will entitle the person getting up the club to one of *Wheeler & Wilson's* best **$45 Sewing Machines,** (including **Hemmers**) new from the factory, and of the very best make. There is no better family machine than this made as we have proved by nearly three years' use in our own family. We want no better.—The machines will be selected new at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium B.

130 Subscribers at 80 cents each, (or **90** at $1 each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopædia,** now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Ten volumes are now ready, and the remaining five will be furnished as fast as issued. Price, $45.

Premium C.

98 Subscribers at 80 cents each, (or **69** at $1 each,) will entitle the person getting up the club to one of *Willcox & Gibbs'* **$35 Sewing Machines,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread), and has several points superior to others. It is neat, well made, simple in its operation; and having tested one for some time past in our own family, we can recommend it to those who can not afford to buy the higher priced double-thread machines. (The regular price of this machine is $30, but we have included in our offer $5 extra for the set of *Hemmers,* because those used with this machine are very simple and effective, and should go with every one sent out.) The machines given as premiums, will be selected new at the factory, be well boxed, and will be forwarded to the recipient free of expense, except for freight after leaving the city. They will go out set up ready for use, with printed directions for operating.

Premium D.

65 Subscribers at 80 cents each, (or **32** at $1 each,) will entitle the person getting up the club to one of the New **$10 Wringing Machines,** described on page 247 of the August *Agriculturist.* This is one of the best labor-saving inventions of the day, and we unhesitatingly say that it will pay to have one to assist in the washing of every family, even if of only moderate size. We would not take $50 for our machine, if another could not be purchased.

Premium E.

45 Subscribers at 80 cents each, (or **20** at $1 each,) will entitle the person getting up the club to one of *Kendall's* **Aneroid Barometers,** described on page 232 of the August *Agriculturist.* This is a good portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. (New price $7.50.)

Premium F.

50 Subscribers at 80 cents each, (or **26** at $1 each,) will entitle the person getting up the club to one of the best **$8 Straw and Hay Cutters.** [If preferred, the best **$8 Subsoil Plow** (two-horse) will be given.]

Premium G.

42 Subscribers at 80 cents each, (or **19** at $1 each,) will entitle the person getting up the club to the new and enlarged $6½ *Pictorial Edition of* **Webster's Unabridged Dictionary.** This standard work comprises **1748** large

3-column pages. It is not only an ornament to every house, but is of great practical use; and its full definitions place it next to the Cyclopædia as a source of general information. It weighs 8½ lbs., and can go by express; or be sent by mail for 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles.

Premium H.

40 Subscribers at 80 cents each, (or **21** at $1 each,) will entitle the person getting up the club to one of the best **$6½ Hand Corn Shellers**—a convenient, effective, and useful implement.

Premium I.

30 Subscribers at 80 cents each, (or **16** at $1 each,) will entitle the person getting up the club to one extra copy of Vol. XX, and also to the **4** previous unbound **Volumes** of the *American Agriculturist,*)16, 17, 18, 19,) *sent post paid.*

Premium J.

26 Subscribers at 80 cents each, (or **13** at $1 each,) will entitle the person getting up the club to a **Pocket Microscope** with the celebrated "hour-glass," or Coddington lens, in a solid silver case. Sent post-paid.

Premium K.

25 Subscribers at 80 cents each, will entitle the person getting up the club to an extra copy of Vol. XX, and also to any *three* of the unbound volumes 16, 17, 18, and 19 sent post-paid. ☞ **20** Subscribers at 80 cents each to an extra copy of Vol. XX, and *two* of those volumes. ☞ **15** Subscribers at 80 cent each, to an extra copy of Vol. XX, and *one* of the previous volumes.

Premium L.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropiate present to any of our younger readers. They will be sent post-paid any where within 3000 miles. (If to go to the British Provinces or to the Pacific Coast, the recipient will need to send 84 cents for the extra postage required above the 6 cents per ounce which we pay. This and the next premium, if sent with our box of seeds, going to California in February, can go without the extra postage.

Premium M.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a mahogany case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, they will answer for ordinary practice by children or beginners, and for common sketching. They will also be sent by mail, post-paid. (If to go to the British Provinces, or to the Pacific Coast, $1,05 will need to be sent by the recipient to pay the extra postage above 6 cents per ounce.)

Premium N.

10 Subscribers at 80 cents each, will entitle the person getting up the club to any *one* of the four previous unbound volumes (16, 17, 18, 19,) sent post-paid.

Premium O.

237 Subscribers at 80 cents each (or **125** at $1 each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one (costing $150) for two years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums, will be sent new directly from the factory at Buffalo, ready boxed, and without extra expense to the recipient, except for freight after leaving the factory.

☞ The above premium list may be made up by the members of a congregation, or Sabbath School, and an instrument thus secured for a church or school-room.

Premium P.

182 Subscribers at 80 cents each (or **105** at $1 each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$60 Melodeons** (4½ octaves.) See remarks above.

Premium Q.

130 Subscribers at 80 cents each (or **90** at $1 each), will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$45 Melodeons** (4 octaves.) See remarks above.

N. B.—Higher priced Melodeons will be given for larger lists, in the same proportion.

Book Premiums.

Valuable Book Premiums.—Instead of the above premiums, any person getting up a club of 20 or more names may choose any desired Books from the list (advertised on page 350 of last month) *to the amount of 12½ cents for each name forwarded at* 80 *cents,* (or 32½ cents for each name sent at $1,) and the books will be sent post-paid. (If to go over 3000 miles, the recipient will need to send 20 cents for extra postage on each dollar's worth of books.) ☞ Persons making up a club for any of the above premiums, and getting some names over the required amount, will be entitled to books for the surplus names.

* * *

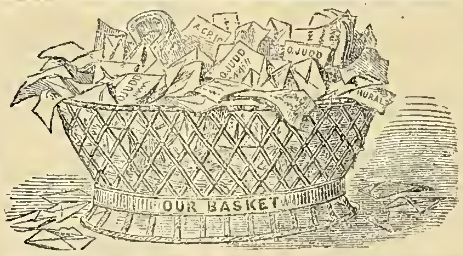
Barometers Cheaper.—Just as we go to press, we are informed by Mr. Kendall, that improvements in machinery will enable him to make and sell his $10 *Aneroid Barometer* at $7½. This will bring this useful instrument within the reach of a larger number of persons. We make a reduction in our premium list. (See Premium E.) We shall keep a few on hand at the reduced price, to supply to those who can not get them conveniently elsewhere, as they are not yet on sale generally.

* * *

Yale Agricultural Lectures.

The public will be gratified to learn that the novel experiment of the *Yale Agricultural Lectures* of last Winter was so successful as to induce its repetition this Winter on a more complete scale. The course will commence Feb. 5th, and continue through the month. These lectures which are of great value to the whole country, and worthy the attention of every cultivator, are given under the auspices of the *Yale Scientific School*, or Scientific Department of Yale College, as a supplement to its newly instituted course of practical collegiate education, and for the benefit of the public at large. A new and important feature of this course will be its complete illustration by specimens, drawings, models, and animals. Life-sized paintings of groups from celebrated herds, will be included in these illustrations. The lectures on training and breaking horses are to be accompanied by practical illustrations. The lecturers of last year will take part in the course, and other eminent names, with a variety of new subjects, will be added to the list.

The expenses of the course are provided for in part by subscription. The lectures are under the direction of Prof. John A. Porter, who may be addressed for further information, at New-Haven, Conn.



Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from whenever we have room left here.*

Basket Overflowing—Deferred Items.—A large mass of queries, notes, etc, are waiting room, the index to the volume having crowded out several pages. Our plan for next volume is to devote much more space to this department, where a great variety of information can be given in condensed form.

Send Along Items, Queries, etc.—Let all our readers now sending in their renewals, slip into their business letters some item of information, or of interest to others, or a query—to be used in the general reading columns, or for basket reference. All such items should be marked "for Editors" and be on a separate sheet from business matters. Each slip should also contain the date, and the name and address of the writer.

Note from the Big Potato Man.—"I see Mr. Editor that you have been drawing a picture of neighbor Smith and myself, and promising that I would give my method of treating the land where you saw that big crop of potatoes. This was more than I looked for—but as I never break a promise, I wouldn't like to be the cause of your breaking yours. I will write out my experience just as soon as I can get things fixed up for Winter. You will hear from me in time for January, or February at latest."

Guano Frauds.—A chapter on the adulteration of Peruvian Guano, now extensively practiced in this city, was crowded out of the preceding pages. We will only say now, that probably not over three or four of all the dealers here, sell a pure article, while the mixing is so skillfully done that few can distinguish the pure from the adulterated. Further remarks will be offered before our readers need to lay in a Spring supply.

More Pumpkins.—E. V. B., Wallingford, Conn., raised this season from one seed ten pumpkins, weighing 853 lbs. The largest weighed 185 lbs., the next in size 143 lbs.

That $500 Chess Premium.—There is no question about the good faith of our offer. We don't believe it possible in the nature of things to produce chess from pure wheat under any circumstances—such a thing would be equivalent to a new creation and would falsify the doctrine of the "permanence of species." It would be as reasonable to expect to raise beets from turnip seed. We would therefore very cheerfully pay the $500 offered by us—or even more—for the privilege of first publishing to the world so important a discovery, established by clear and incontrovertible evidence. Why, it would pay in a business point of view, as an advertisement. We do not call in question the good faith of those who think they have seen the thing done. We simply believe there has been some mistake. If the change has been produced, it can be done again under the same circumstances. Therefore let the believers in this theory try whatever experiments they choose, and if they succeed in satisfying themselves, the experiment can be repeated under circumstances that will leave no doubt of its feasibility. Whoever succeeds will be entitled to the reward offered which will be gladly paid, both as a contribution to science and for the incidental advantages named above. This offer holds good for five years at least. We only ask to be excused from answering the many letters which have been received on this subject, until some one is ready to report a perfectly successful new experiment.

Improved King Philip Corn.—Edwin Budd, Burlington Co., N. J. The improvement consists in an increased length of ear. It ripens early and gives a much larger yield than the old King Philip, which was specially valuable where other kinds could not be ripened

French Asters.—J. F. Shores, Jr., Rockingham Co., N. H., describes a bed of these which he raised the past season. They began to bloom in August, were 2 to 3 feet high, and 3½ inches to 3¾ inches in diameter.

Concert by Cows—Bells Wanted.—The suggestions in our article, page 326, on improved bells for cows, has called forth several pleasing responses, and the general question is, "where shall we get them." Bell makers please N. B.—Mr. M. W. Phillips, of Edwards Depot, Miss., writes: "....I am in for the bells. If friend Judd will only get somebody to make the bells, good substantial ones tuned to different notes, and fitted for a wide neck strap, I will take 10 or 12 for cows, also some for calves, sheep, and goats, and rather than not have them, I would use hog bells. Nothing is so pleasing to me as the bell at twilight, with its regular beats, the stately cow moving along as if she were queen indeed....Put me down for a chime of cow bells, do. calf, do. sheep, and lastly goats."

Cheating in Seeds.—R. F. Chute, Chickasaw Co., Miss. The practice of "killing" seeds has been pursued for many years by dishonest tradesmen. Where seeds resemble each other, the cheaper kinds are used to adulterate the more costly, as mustard, rape, etc., mixed with turnip seed. The cheat would be detected if all the seeds should germinate; to prevent this, the mustard or other cheap article is "killed" by submitting it to some chemical or other process: only the genuine seeds sprout, and the failure of the crop is attributed to unfavorable weather, insects, etc.

Best time to Root Prune.—I. A. White, Erie Co., Pa. In support of what was said on page 243, August *Agriculturist*, we have Thomas, Barry, and Downing, as authority for root pruning in Fall and Winter. Mr. Rivers, of England, practices it in November. Some growers prefer August, and if the season is not too dry, that month answers very well, but, all things considered, we prefer November.

Ice Houses with Double Hollow Walls.—A Rural New-Yorker correspondent thinks his success in keeping ice is due to one hollow wall for confined air, and another adjacent space filled with spent tan. Tan was also spread thickly between a double roof so connected with the sides as to keep them well filled. An inch and a half auger hole was bored through the roof for ventilation. The room was 10 feet square and 8 feet high, extending 2 feet under ground upon a gravel bed.

Hot Corn for Fowls.—C. F. Wright, Chautauque Co., N. Y., states that boiled corn fed while hot, will make hens lay, as he has seen proved by two of his neighbors. It seems more likely that the cooking produced this result, rather than the feeding while hot.

Flowering Bulbs.—Messrs. J. M. Thorburn & Co. have our thanks for a fine assortment which we have planted around the "Homestead."

Grapes.—Dr. R. T. Underhill, has laid us under obligations for a box of fine Isabella and Catawba grapes from his celebrated Croton Point Vineyards. Need we say they are good.

Boston Lady Currant.—J. N. Baker, La Salle Co., Ill. We know of no currant by this name. Red and White Dutch are good, well tried sorts.

Brandt on the Age of Horses.—This work, referred to on page 346, on further examination, appears to be a capital thing. We have a letter from Dr. Dadd, Veterinary Surgeon, which speaks of it as the best thing of the kind ever published. The price is also reduced from $1 to 50 cents. We can get and forward copies when wanted by our subscribers.

Bone Dust.—S. G. Smith, West Brattleboro', Windham, Co., Vt. The price of this article ranges from $3 to $3 50 per bbl., according to the quantity ordered. It would pay to use it at this price if good compost of muck and stable manure could not be procured at a reasonable rate. Messrs. Lister & Brother, advertise a good article,

Business Notices.

☞ *Eighty Cents a Line of space.*

SANFORD'S CHALLENGE HEATERS,

PORTABLE AND SET IN BRICK, ARE PRONOUNCED by the most competent judges, to be *the best* in market, giving the *largest amount of* heat with *the least fuel*, owing to their being so constructed as to *burn the gases and smoke*, and with *extensive radiating surface*, arranged to warm the air rapidly to *a soft Summer heat.* Eight sizes, adapted to warming one or two rooms only, or a *whole house*, CHURCHES, ACADEMIES, PUBLIC HALLS, etc., etc. *Send for book of description and testimonials* from some of the *most respected citizens* of New-York and elsewhere.

THE CHALLENGE AIR-TIGHT KITCHEN RANGE,

suited equally to wood or coal, *burns the gases and smoke, sifts its ashes*, has eight openings for boiling, BROILS WITHOUT BURNING OR SMELL OF SMOKE, *and without interrupting boiling;* OVENS unusually large, yet BAKING QUICKLY and *well at the bottom;* flues very deep, and easily cleaned; water backs, if desired; CASTINGS EXTRA STRONG. Three sizes. A PREMIUM over all others, *was awarded* at the late NEW-JERSEY STATE FAIR.

COSMOPOLITE GAS-BURNING AIR-TIGHT PARLOR RADIATOR AND VENTILATOR.

This beautiful stove is all its name denotes. By an ingenious, yet simple arrangement of flues, it is so contrived as effectually to burn the gases and smoke, *filling the interior with a brilliant blue blaze*, and radiating the heat so completely, *that the bottom of the stove is as hot as any other part.*

Besides this, there is a very convenient contrivance invented expressly for this stove, whereby the *perfect combustion of the coal is secured, with great economy, and at the same time the impure air is drawn out of the room.* FIRE MAY BE KEPT ALL WINTER WITHOUT GOING OUT.

SANFORD, TRUSLOW, & CO.
239 and 241 Water street.

Manufacturers also of a great variety of Cooking and Heating Stoves, adapted to every want.

GROVER & BAKER'S
CELEBRATED NOISELESS
FAMILY SEWING MACHINES,

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* * *

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Monday Morning, Nov. 19, 1860.

Receipts of Breadstuffs continue large, in anticipation of the closing of the canals. The demand has generally been good. Flour and Wheat have been in active request, and the export trade brisk. Within a week or two, owing to the excitement and stringency in financial circles, shippers of produce have experienced great difficulty in selling their Sterling Exchange Bills, and have curtailed their orders for produce. Rates on freight to the principal ports of Great Britain, fluctuating from day to day and closing with an upward tendency, have somewhat discouraged them. This diminution of the inquiry from shippers has occasioned much uneasiness among receivers of produce, who, having made large advances of money on the supplies in their hands, have had to force their stocks on the market, to meet their notes. The result has been a reduction of prices of most kinds of Breadstuffs. To-day, we learn that two or three of our strongest Banks propose to buy first class Bills of Exchange, which would thus relieve shippers, and improve the market as the wants of buyers for export are known to be large. The number of vessels in port is extremely small, and rates on freight rule high. But the active demand for freight room will be sure to bring here an increased supply of shipping and rates must be reduced to meet the views of exporters ... The great scarcity in Great Britain can hardly fail to keep up good prices here, unless a financial pressure shall create great stagnation in all kinds of business ... Cotton advanced in price early in the month, but closes heavily. The sales have been fair. The course of receipts thus far, if taken as a criterion, points to a moderate yield, as compared with last year. The low stage of rivers hitherto, however, doubtless accounts for part of the falling off. An important feature in this crop is the comparative scarcity of the better qualities and good stapled cotton. The receipts, up to the present time, have comprised a larger proportion of the low grades than usual, which also tends to enhance the value of the better qualities, as the demand is chiefly for these.... Hay and Hops have been in lively request at higher prices ... Provisions and Groceries have been inactive, as have likewise been Hemp and Wool.... A fair inquiry exists for Clover Seed, and Domestic Tobacco. The former is a trifle dearer.... The changes in other kinds of Produce have not been very important.

CURRENT WHOLESALE PRICES.

	Oct. 18.	Nov. 17.
FLOUR—Superf to Extra State.	$5 40 @ 5 75	$5 15 @ 5 60
Superfine Western	5 40 @ 5 55	5 15 @ 5 25
Extra Western	5 65 @ 7 25	5 40 @ 7 25
Fancy to Extra Genesee	5 80 @ 7 25	5 60 @ 7 25
Super. to Extra Southern	5 90 @ 7 75	5 50 @ 7 50
RYE FLOUR—Fine and Super.	3 50 @ 4 30	3 50 @ 4 25
CORN MEAL	3 50 @ 3 90	3 30 @ 3 70
WHEAT—Canada White	1 48 @ 1 50	1 40 @ 1 45
Western White	1 46 @ 1 60	1 37½@ 1 50
Southern White	1 47½@ 1 62½	1 42½@ 1 55
All kinds of Red	1 22 @ 1 40	1 15 @ 1 35
CORN—Yellow-	74 @ 77	72 @
White	None selling.	72 @ 80
Mixed	71½@	69½@ 71
OATS—Western	38½@ 39½	37 @ 37½
State	39½@ 40	37½@ 38
Southern	37 @ 39	36 @ 37
RYE	80 @ 81	70 @ 72
BARLEY	77½@ 85	65 @ 80
HAY, in bales, per 100 lbs	75 @ 1 00	80 @ 1 06¼
COTTON—Middlings, per lb	11¼@ 11½	11¼@ 11½
RICE, per 100 lbs	4 00 @ 4 87½	4 00 @ 4 75
HOPS, crop of 1860, per lb.	38 @ 37½	35 @ 42
PORK—New Mess, per bbl	18 81 @18 87	18 25. @18 50
Prime, new, per bbl	14 37 @14 50	12 50 @
BEEF—Repacked mess	8 75 @ 9 25	7 00 @10 00
Country mess	5 00 @ 6 00	5 00 @ 5 50
LARD, in bbls., per lb	12¼@ 13	12 @ 12½
BUTTER—Western, per lb	11 @ 15	11 @ 15
State, per lb	15 @ 20	15 @ 20
CHEESE	9 @ 11	9 @ 11
EGGS—Fresh, per dozen		20 @ 21
Western, per doz		16 @ 19
POULTRY—Fowls, per lb	8 @ 10	10 @ 14
Chickens, per pair	44 @ 62	50 @ 56
Geese, per lb		8 @ 10
Ducks, per pair	56 @ 75	12 @ 14
Turkeys, per lb	10 @ 12	11 @ 14
Partridges, ℔ pair	68 @ 75	62 @ 68
FEATHERS, Live Geese, p. lb.	47½@ 55	45 @ 53
SEED—Clover, per lb	9 @ 10	9¾@ 10½
Timothy, per bushel	2 65 @ 2 75	2 75 @
SUGAR—Brown, per lb	6¼@ 8½	5¾@ 8¼
MOLASSES, New-Orleans, p. gl.	45 @ 48	40 @ 45
COFFEE, Rio, per lb	13 @ 15¼	11½@ 14¾
TOBACCO—Kentucky, &c, p. lb.	3 @ 13	3 @ 13
Seed Leaf, per lb	6 @ 25	6 @ 25
WOOL—Domestic fleece, p. lb.	34 @ 58	34 @ 58
Domestic, pulled, per lb	28 @ 48	28 @ 46
HEMP—Undr'd Am., per tun.	150 @160	150 @160
Dressed American, per tun.	200 @220	190 @220
TALLOW, per lb	@ 10	10⅜@ 10½
OIL CAKE, per tun	32 00 @40 00	33 00 @39 00
APPLES, Prime, per bbl	1 50 @ 2 00	1 75 @ 2 00
Medium, ℔ bbl	1 00 @ 1 25	1 50 @
Common, per bbl	50 @ 1 00	75 @ 1 00
Dried Apples, per lb	3½@ 5	3½@ 5
Dried Peaches, per lb	10 @ 15	10 @ 13
POTATOES—Mercers, per bbl.	1 25 @ 1 75	1 25 @ 2 00
Peach Blows, ℔ bbl	1 12 @ 1 37	1 25 @ 1 50
Sweet, Virginia, per bbl	2 00 @ 2 25	3 00 @ 3 25
Delaware and S. Jersey, ℔ bbl.	1 75 @ 2 50	3 00 @ 3 50
ONIONS, Red, per bbl	2 00 @ 2 50	1 25 @ 1 38
White, per bbl	1 75 @ 2 00	2 00 @ 2 50
TURNIPS, per bbl	75 @ 1 12	63 @ 1 00
CABBAGES, per 100	2 50 @ 3 50	3 50 @ 5 00
SQUASHES, per bbl	75 @ 88	75 @ 87
CRANBERRIES, Eastern, ℔ bbl.	9 00 @12 00	10 00 @12 00
Western, ℔ bbl	6 00 @ 8 00	7 00 @10 00
CELERY, ℔ dozen	75 @	50 @
PUMPKINS, ℔ 100	4 00 @ 5 00	4 00 @ 5 00

TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days *this* month	555,508	3,827,854	910,361	36,125	429,019	580,225
26 days *last* month	578,791	3,741,262	789,626	23,413	149,412	344,939

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 business days *this* mon.,	508,310	4,267,500	2,147,000	115,400	634,700
26 business days *last* mon.,	588,670	3,877,200,	1,367,500	60,250	297,350

The receipts at tide-water of the principal kinds of Breadstuffs from the opening of the Canals to and including the 14th of November, have been as follows:

	1858.	**1859.**	**1860.**
Canal open	April 28.	April 15.	April 25.
Flour bbls.	1,728,636	645,150	1,032,857
Wheat, bush	7,846,020	3,531,507	14,519,076
Corn, bush	6,377,369	2,402,683	13,581,306
Barley, bush	2,696,407	1,905,789	2,487,686
Rye, bush	4,216,533	4,748,088	5,900,612
Oats, bush	476,859	311,986	305,574

Breadstuffs Trade of Chicago, Jan. 1 to Nov. 14.

	RECEIPTS.		SHIPMENTS.	
	1860.	1859.	1860.	1859.
Flour, bbls	542,812	618,251	570,000	546,685
Wheat, bush	13,070,425	7,500,018	11,800,953	6,648,731
Corn, bush	15,189,261	4,805,638	13,368,062	3,540,473
Oats, bush	1,505,720	1,273,020	949,405	979,502
Rye, bush	281,125	220,442	101,429	118,849
Barley, bush	505,818	858,833	217,878	371,790

Reducing the flour to bushels, the total receipts of grain since the 1st of January amount to 33,266,409 bushels, against 17,449,203 bushels to same date in 1859.

N. Y. Live Stock Markets.—THE CATTLE MARKETS. Receipts for four weeks just ended, 20,126, or 5,031 per week. The markets were overstocked, and prices ruled low, until the short supply of November 6th, (Election week,) advanced the rates near 1 cent ℔ ℔. They fell again Nov. 13th, when prices were: Premium, 10c. ℔ ℔, estimated dressed weight; prime grades, 9c.@9¾c.; medium, 8c.@8½c; poor, 6c.@7½c. Average 8c., or a net advance of ¼c. from our last report.

VEAL CALVES.—Receipts have been moderate, only 2,819 for the month, or 705 per week. Prices have advanced a trifle, a few of the best 7½c. ℔ ℔, live weight—mostly 6c.@7c.

SHEEP AND LAMBS have been plenty except during election week. The receipts for the past month were 52,510 or 13,127 per week. At the last market, Nov. 14, with 17,287 on sale for the week, the market was depressed, prime sheep selling for prices equivalent to 4½ c. @ 4¾ c. ℔ ℔ live weight and fair sheep, 4 c. @ 4¼ c. There is a good inquiry for store ewes by the neighboring farmers at $3 25 @ $3 50 ℔ head.

LIVE HOGS.—Receipts since last reports have been 34,758, or 8,689 per week. The market continues fair, being now 6¼c.@6⅝c. ℔ ℔, live weight for corn fed, and 5¾c.@6c. for still hogs.

The Weather, since our last report has been somewhat variable, but little frost, with many clear, fine days, which the farmers have improved in securing late crops—Our DAILY WEATHER NOTES, condensed, read thus: *October* 20, rainy—21, 22, cloudy with mist—23, cloudy, mild—24 to 27, clear and fine—28, 29, cloudy—30, fog and light rain—31, rain A. M., clear P. M. *November* 1, 2, clear, fine, warm—3, very heavy rain, barometer fell to the lowest point for a year past, viz., 29.22—4, 5, clear and cool—6, cool, light showers—7, 8, clear, fine—9, cloudy, heavy rain at night and next day—11, cloudy, light rain—12 to 16, clear, fine mild weather—17, clear, rain at night—18, rain A. M., cloudy P. M.—19, cloudy, warm.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain.]

OCTOBER.

1......44*r*	8......53*r*	14......47*r*	20......51*r*	26......48
2......58*r*	9......44	15......40	21......54*r*	27......44
3......54	10......49	16......42	22......53*r*	28......46
4......52	11......60	17......44	23......53	29......52
5......59*r*	12......50	18......51	24......53	30......58*r*
6......52	13......44	19......56	25......48	31......62
7......40				

NOVEMBER.

1......61*r*	4......54	7......39	10......51*r*	13......45
2......60	5......42*r*	8......38	11......46*r*	14......41
3......62*r*	6......52*r*	9......40*r*	12......45*r*	15......41

About Our Free Seed Distribution.

SEEDS SCARCE AND HIGH THIS YEAR.

On page 373 we present a *partial* list of seeds to be distributed free during the winter. It is impossible at this date to make the list as large as we intend it shall be, because we can not yet ascertain whether enough of several desirable kinds, can be obtained to warrant us in offering them generally. The past season has been a *very bad one* for growing good seeds. In this country, especially hereabouts, the drouth has greatly diminished the yield. Several kinds of valuable new Squashes and Melons, which we attempted to raise for seed, were kept back by the drouth so much, that they did not mature their seeds before frost. The same may be said of some other plants. In England, where we get many of our most valuable seeds, the excessive rains were of more serious injury than the drouth here, and our agents have not yet been able to fill our orders, so that we do not include in our list several choice garden and flower seeds, a part of which, and we hope all, will be added next month. As it is, the seeds we now offer will be found of special value. Nothing but pure, fresh, reliable seeds, of good varieties. will be distributed.

All good garden and flower seeds will be *scarce* and *high* this year, in all parts of the country, for the reasons above stated, and on this account our seeds sent out, will be more valuable than usual. They will also cost us much more than in other years. But they will be cheerfully distributed. The fact that half a million plots of vegetables and flowers, springing up from seeds sent out by us, will be growing all over the country, from Newfoundland to California, Oregon and Washington Territory, will of itself be a pleasure that will in no small degree compensate the expense and trouble involved. And as these seeds will be multiplied indefinitly, who can estimate the ultimate results of the *Agriculturist* Seed Distribution for 1861.

TO EVERYBODY.

One or More Valuable Premiums for Every Neighborhood!

HOW AND TO WHOM THEY ARE GOING.

Let it be remembered that our Premiums, (see page 373) are not limited in number. They are not confined to a few articles offered for the highest lists, but each one is for a definite number of names. The more of them given, the better can we give others, for the larger our subscription list, the less the cost for each paper. So, then, we can give one or more premiums for clubs to *every town and neighborhood in the land*, and shall be happy to do so.

All the articles offered are *good ones*, useful everywhere, and there is not a neighborhood of twenty families in the country where one of them ought not to be secured, and might be if some person would take hold of the matter. Does not this single December number, with its varied contents, and the long index catalogue of topics treated in this one volume, show that such a volume, (especially the next one, which is to be better than any previous one,) will be worth its small subscription price to every family?

Will not the reader, then, have the kindness to see to it that some one, (if not himself or herself,) makes the effort to get up a club, if it is not already being done?

We have heard from over 4,000 persons who are now making up clubs, and we know not how many more are doing it. There is yet time to *begin* the work.

Many persons are making up clubs on their own account.

Others are making up clubs to secure a Sewing Machine for a clergyman, and others for a poor widow, and the machine will be on hand at Christmas.

A good many men, including a large number of Post-Masters, are preparing to surprise their "better halves" with a Sewing Machine, about the Holidays. Not a few did this last year.

Several *Congregations* are obtaining Premium Melodeons for the Churches and others for Sabbath School-rooms.

A large number of *Schools* are making up clubs—some to get Melodeons; some to obtain the Cyclopædia; and some for the Dictionary and other books.

The Ozaukee Agricultural Society, in Wisconsin, subscribed $95 for 95 copies to be given among *their* premiums, and received the Sewing Machine, which was exhibited at their Fair, and then sold at auction for the benefit of the finances. (A good hint to other Societies.)

A *Shoe Dealer* in Ashtabula, Ohio, offered a copy of the *Agriculturist* for 1861, for each $15 worth of shoes sold to his customers. He has already sent $167 for 167 names, and has himself received a $100 Melodeon.

Several *Railroad Conductors* are collecting lists of subscribers, as they have opportunity in the cars, and thus securing various premiums for themselves, Sewing Machines, Cyclopædias, etc., etc.

And so the work is going on all over the country. The enterprise pays all round. The people are persuaded to read and think; the canvassers are getting good articles (without money,) in pay for their time; our subscription list is going up, and of course we are pleased.

"The Baker's Dozen."

All new subscribers for 1861, received before Dec. 22, will be presented with this December number. When specially asked for, we will also send a copy of the November number. After Dec. 22, the January number will be sent at once to all names coming in.

Please Remember the German Edition.

We are publishing, at a good deal of expense, a complete edition of the *Agriculturist* in the GERMAN Language, every way equal to the English Edition. Will our friends please remind their German neighbors of the fact.

What Money to send for Subscriptions.

Bills on Banks in New England, N. Y., N. J., Del., and Eastern Penn. are most valuable to us; those on any specie paying bank in the U. S., or Canada, will be received however.

Three-Cent Postage Stamps are very good. For sums of over five dollars, it is usually better to send a draft on a New York bank, payable to the order of the publisher. These are absolutely safe, though few money letters are lost when properly sealed, and mailed by an honest Postmaster. Nine out of ten losses reported, result from the omission, by accident, or otherwise to put the money in. Seal money letters closely, clear to the corners. Gold coins should be fastened into a card by splitting and pasting or sewing it, or be fastened between two thick pieces of paper. Postage stamps should have a piece of paper between the gummed surfaces, to prevent sticking together, or upon the letter. Three-cent stamps are just as good as money. Ten-cent stamps are not easily disposed of here, in large quantities. Canada P. O. stamps are valueless here, either for postage or to sell. Many letters come in which the name, or P. O., or State, is omitted. In such cases we have to wait for a scolding letter before learning where to send the paper.

American Agriculturist.

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The paper is considered paid for whenever it is sent, and will be promptly discontinued when the time for which it is ordered expires.

All business and other communications should be addressed to the Editor and Proprietor.

ORANGE JUDD, 41 Park-Row, New York City.

"Time Up."

This number ends the subscription of a large portion of our subscribers. We trust every one will renew, and do so promptly, that we may get the names regularly upon the mail books and send off the January number before the beginning of the year. It will be as easy to do it now as a week or two later, and it will assist us greatly in making up our books for the coming year. Please get a neighbor, or two, or three, or more, to join you.

Now for Next Year!

This item closes our Editorial Labors upon volume nineteen. We look with pleasure to the intercourse we shall hold with our readers through volume twenty. Many thousands of new readers have already enrolled themselves with us, and we have the most encouraging indications that the number will be very greatly increased. Our former readers, will, we believe, very generally continue with us. We have added largely to our *working* force, and we shall, as editors, have much greater opportunity of mingling with our readers upon their farms, and in their gardens, and hence be able to gather more practical information. We do not like to promise too much—we have always tried to do the best we could—but our own hopes are strong that volume 20 will be eminently worthy its advanced place in the series. Farewell to our "teens."

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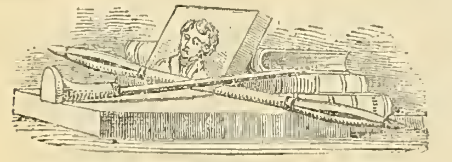

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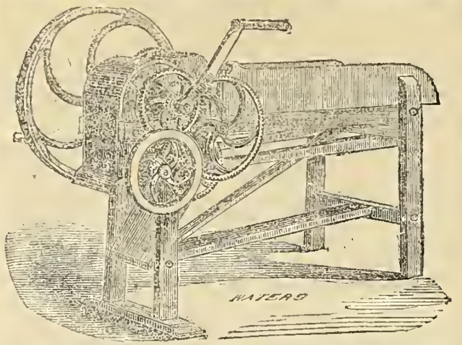

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